Motherboard with VIA Eden Processor

MX266

User's Manual

http://www.bcmcom.com

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WARNING:

There is a danger of a new battery exploding if it is incorrectly installed, replace your system's CMOS RAM battery only with the identical CR-2032 3V Lithium-Ion coin cell (or equivalent) battery type to avoid risk of personal injury or physical damage to your equipment. Do not dispose battery along with household waste. Contact your local waste disposal agency for address nearest disposal site or as required by the local ordinance (where applicable).

CAUTION:

References:

This manual is created and written by BCM Technical Dept., but not limited, to the information from the MX266 External Production Specifications, and MX266 Specifications. If any comments, suggestions, or errors for this manual, please write an e-mail to support@bcmcom.com.

Compliance & Certificate

ISO 9001 Certificate:

This device was produced in our plant with advanced quality system certified by DNV QA Ltd. in according to ISO 9001. This Certificate is valid for:
DESIGN & MANUFACTURE OF MOTHERBOARD AND PERSONAL COMPUTERS.

CE Declaration:

CE marking is a visible declaration by the manufacturer or his authorized representatives that the electrical equipment to which it relates satisfies all the provisions of the 1994 Regulations.

FCC Compliance:

FCC stands for **F**ederal **C**ommunications **C**ommission.
This product complies with FCC Rules Part 15 and has been tested, and complied with the EMI rules by a certified body. In normal operation, there shall be no harmful interference caused by this device nor shall this device accept any interference received, including interference that may cause undesired operation of this product.

Easy Installation

Easy Installation Steps

The following “Easy Installation” steps are for users accustomed to the assembly of a computer system. For those individuals requiring more specific information, please refer to the more detailed descriptions located within the latter chapters of this manual.

Note: You must keep your power cable unplugged until the following installation steps are completed.

Getting Started

-Touch a grounded metal surface to release static electricity stored in your body before unpacking your motherboard. For details please refer to Precaution.

-Install the 3.3 volt un-buffered DDR SDRAM into the 184 pin DIMM slots.

-Plug in any peripheral card(s) that you want to be included in the setup.

-Plug in all cables included in the package except for the power cord.

-Please recheck all steps to ensure no mistakes have been made and then plug in the power cord and turn on the power to enter the BIOS setup, Chapter 3.

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Manual Revision Information

Reversion	Revision History	Date
1.0	First Release	Sept. 2004
1.01	Update IDE connector orientation and add Signal Pin Out	Oct. 2004
1.02	Update audio header signal pin out	Feb. 2005

Item Checklist

- ☑ MX266
- ☑ 80 wire ATA66/100 IDE cable
- ☑ SATA data cable
- ☑ 2 COM port cable (DB9)
- ☑ CD for motherboard utilities
- ☑ Standard I/O Shield for MX266
- ☑ MX266 User's Manual on CD (Digital Format)
- ☑ MX266 Quick Reference Guide

VIA Eden ESP Processor Family
Advanced CoolStream Architecture

The MX266 has been design with VIA Eden processor and CLE266 Chipset that incorporate with the low heat and high performance x86 processor

The VIA Eden ESP10000 and ESP8000 employ VIA's advanced CoolStream™ architecture that is packed with new digital media performance features, including support for sixteen pipeline stages, SSE multimedia instructions, StepAhead™ Advanced Branch Prediction, an efficiency- enhanced 64KB Full-Speed Exclusive L2 cache with 16-way associativity, and a full-speed FPU.

When coupled with the VIA CLE266 chipset, the VIA Eden ESP10000 and ESP8000 deliver exceptional performance for all the most critical data streaming, Internet, productivity, and digital media applications, including Voice over IP, video conferencing, web browsing, digital video, and MP3 and DVD playback.

Designed for entertainment and communication applications, the VIA CLE266 chipset integrates hardware MPEG-2 decoding and video scaling for high quality DVD acceleration and an integrated 128-bit 2D and 64-bit 3D graphics engine with internal AGP 8X and Alpha Blending for multimedia applications. Together, the VIA Eden ESP processors and CLE266 chipset provide the ultimate low power digital media platform through additional support for DDR266, USB 2.0, TV-out, VIA Vinyl 5.1 surround sound and integrated networking that is highly suited to cool, quiet and low profile digital media devices.

VIA Eden URL

http://www.via.com.tw/en/Products/eden_esp10000.jsp

Chapter 1

Introduction

1-1 Feature of motherboard

The MX266 motherboard is built with VIA Eden ESP Series Processor and CLE266 Chipset with integrated 128bit 2D/ 3D graphics engine, 8X AGP, mini PCI, dual LAN, serial ATA, and LVDS panel support, memory size expandable to 1.0GB. MX266 provide ultimate low power communication and digital media platform solution.

The MX266 motherboard use the VIA CLE266 & VT8237 Chipset Supports 133MHz System Bus in data transfer rate, This motherboard provided a wide range of memory choices with 100/133MHz DDR SDRAM clock frequency to support DDR266/200 DDR SDRAM. MX266 also offers ULTRA ATA **133** and SATA RAID 0 or 1 provide speedier HDD throughout that boosts overall system performance.

With integrated 8x AGP 2D/3D Graphics Accelerator which supports 128bit 2D/ 3D graphics engine, supports hardware motion compensation assist for software MPEG/DVD decode, makes this board a low cost and high performance solution. The MX266 also provide DFP support for those who wish to use of a digital display equip with LVDS TFT panel**.**

The MX266 motherboard equip with dual onboard LAN , one VT8237 Ethernet controller with VT6103 PHY 10/100 and one Realtek RTL8100C 10/100 PCI LAN Controller.

Also integrated onboard an AC'97 2.2 VIA VT1612A Audio CODEC, which is fully compatible with Sound Blaster Pro® that gives you the best stereo sound quality and compatibility.

With USB control as well as capability of expanding to 8 USB2.0 ports to meet faster data transfer, and built-in hardware monitor function. This enable system monitor and protect your computer.

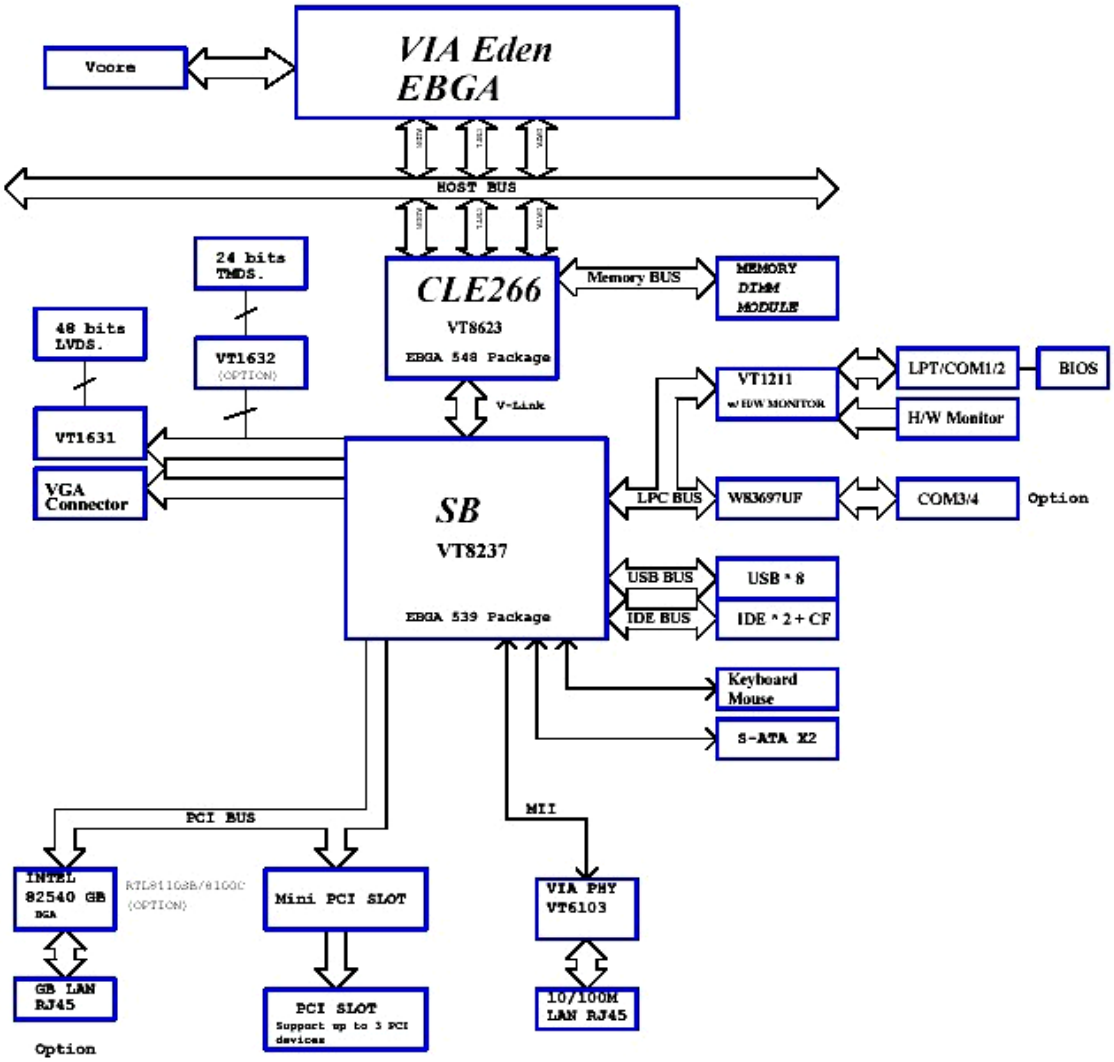
MX266 does provides high performance & Longevity for Embedded Application. It is really a wise choice of computing solution.

1-2 Specification

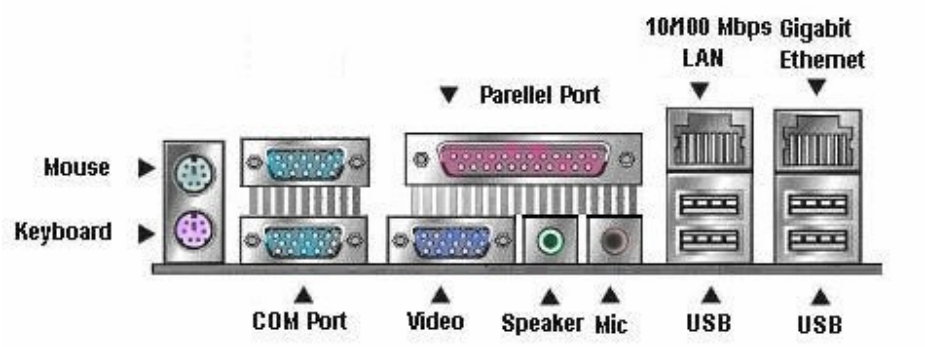
Spec	Description
Design	* Mini ITX form factor 6 layers PCB size: 6.69”(W) x 6.69”(D) (170 x 170 mm)
Chipset	* VIA VT8623 North Bridge Chipset * VIA VT8237 South Bridge Chipset
CPU Socket	* Support VIA Eden ESP10000 (Nehemiah) processor 2x64K cache on 0.13 micron process EBGA processor. * CPU bus Frequency 133MHz * Reserves support for future Eden processors
Video Display	* Integrated Intel High Performance 2D/3D * Video Memory 8/ 16/ 32/ 64 SMA Technology * 48-bit LVDS Interface
Memory Socket	* 184-pin DDR SDRAM module socket 1x * Support Memory Type up to 512Mbit x8/x16 Technology * Support 1M, 2M, 4M, 8M, 32M, 64M x N DRAMs * Support DDR266/200 SDRAM * Expandable to 1GB
Expansion Slot	* 32-bit PCI slot x1 (Optional 2 PCI riser) * Mini PCI x1
Integrate IDE	* Two PCI IDE controllers support PCI Bus Mastering, ATA PIO/DMA and the ULTRA DMA 33/66/100 functions that deliver the data transfer rate up to 100 MB/s * Two Serial ATA host controller with independent DMA operation on 2 port. Data transfer rates up to 1.5Gb/s * Compact flash connector (Optional custom build)
LAN On Board	* VIA VT6103 PHY * Realtek RTL8100C 10/100 (Optional custom build, RTL8110SB, Intel 82559 10/100 or GbE RC82540 or RC82550PCI LAN Controller chip)
Audio	* AC’97 Digital Audio controller integrated * AC’97 2.2 Audio CODEC on board * Sound Blaster Pro compliant * Audio driver and utility included
BIOS	* Phoenix/ Award 4MB Flash ROM
Multi I/O	* PS/2 keyboard and PS/2 mouse connectors * Floppy disk drive connector x1 * Parallel port x1, Serial port x2 (one on header) * USB 2.0 connector x6, (2 on header) * Audio connector Line-out, MIC

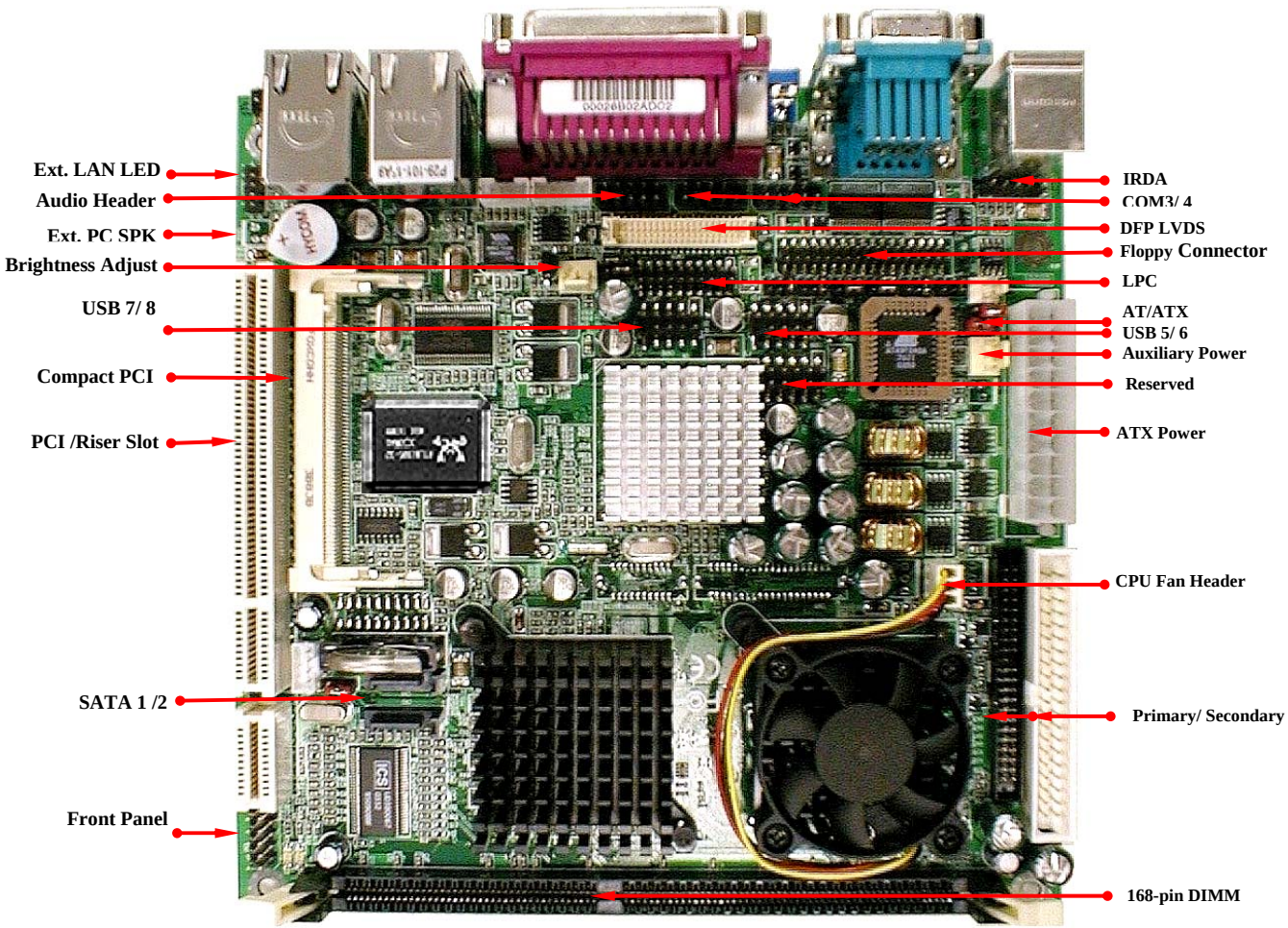
1-3 System Diagram

MX266 Mainboard Diagram



Jumper & Connector





Jumpers

Jumper	Name	Description	Page
JP1	Clear CMOS	3-pin Block	
JP2	Power Mode	3-pin Block	
JP3	CF MA/SL Select	3-pin Block	
JP4	COM2 P9 Select	6-pin Block	
JP5	COM2 Mode Select	6-pin Block	
JP6	COM2 Mode Select	6-pin Block	
JP7	COM2 Mode Select	6-pin Block	
JP8	COM3 P9 Select	6-pin Block	
JP9	COM4 P9 Select	6-pin Block	
JP10	DFP Clock/Data Select	6-pin Block	

Connector / Header

Socket/Slot	Name	Description	Page
CN1	Front Panel	8-pin Block	
CN2	SATA2	SATA Connector	
CN3	Secondary IDE	40-pin Block	
CN4	SATA1	SATA Connector	
CN5	SMBUS Header	4-pin Block	
CN6	CPU Fan Header	3-pin Block	
CN7	Chassis Fan Header	3-pin Block	
CN8	System Fan Header	3-pin Block	
CN9	DVI	20-pin Block	
CN10	Primary IDE	40-pin Block	
CN13	ATX Power	20-pin Block	
CN15	Mini PCI	144-pin Slot	
CN16	AT/ATX Power	3-pin Block	
CN17	Reserved	10-pin Block	
CN18	USB 5/6 Header	10-pin Block	
CN19	USB 7/8 Header	10-pin Block	
CN20	Chassis Intrusion	2-pin Block	
CN21	Floppy Header	34-pin Block	
CN22	LPC	20-pin Block	
CN23	Brightness Adjust	5-pin Block	
CN24	PCI (Riser)	PCI Slot	
CN25	IRDA	5-pin Block	
CN26	COM3	9-pin Block	
CN27	COM4	9-pin Block	
CN28	LCD Panel Connector	40-pin Hirose DF-13A-40DP-1.25	
CN29	Audio Header	10-piin Block	
CN30	LCD Inverter Connector	5-pin Block	
CN31	CD-IN	4-pin Block	
CN36	LAN LED Header	10-pin Block	
CF1	Compact Flash Connector	STD CF (Optional custom build)	

Chapter 2
Hardware installation

2-1 Hardware installation Steps

Before using your computer, you had better complete the following steps:

1. Check motherboard jumper setting
2. Install CPU and Fan
3. Install System Memory (DIMM)
4. Install Expansion cards
5. Connect IDE and Floppy cables, Front Panel /Back Panel cable
6. Connect ATX Power cable
7. Power-On and Load Standard Default
8. Reboot
9. Install Operating System
10. Install Driver and Utility

2-2 Checking Motherboard's Jumper Setting

(1) CMOS RAM clear (3-pin): JP1

A battery must be used to retain the motherboard configuration in CMOS RAM, short 2-3 pins of JP1 to store the CMOS data.

To clear the CMOS, follow the procedure below:

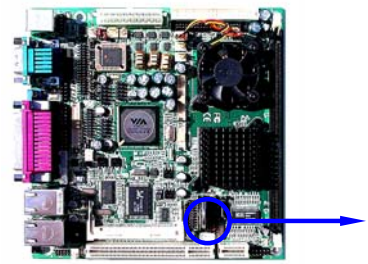
1. Turn off the system and unplug the AC power
2. Remove ATX power cable from ATX power connector
3. Locate JP1 and short pins 2-3 for a few seconds
4. Return JP1 on its normal setting by shorting pins 1-2
5. Connect ATX power cable back to ATX power connector

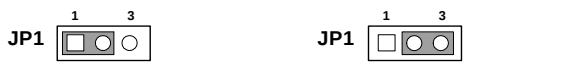
Note: When should clear CMOS

1. Troubleshooting

2. Forget password

3. After over clocking system boot fail





1-2 closed Normal (Default) 2-3 closed Clear CMOS

CMOS RAM Clear Setting

(2) COM Ports Settings

COM3 / 4 Pin 9 Signal Select (JP9, JP8)

MX266 COM3 / 4 pin 9 signal can be selected as +12V, +5V, or Ring by setting JP9 / JP8 / JP4.

COM3 / COM4 / COM2 Select (JP9, JP8, JP4)			
	RI*	+5V	+12V
	2 4 6 1 3 5	2 4 6 1 3 5	2 4 6 1 3 5

COM2 RS232/422/485 Select (JP5, JP6, JP7)

Mx266 COM2 serial port can be selected as RS-232, RS-422, or RS-485 by setting JP5, JP6, and JP7.

COM2 Select (JP5, JP6, JP7)			
	RS232*	RS422	RS485
JP5	2 4 6 1 3 5	2 4 6 1 3 5	2 4 6 1 3 5
JP6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
JP7	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6

(3) CF Master, Slave Select (Optional)

1-2 closed Slave (Default) 2-3 closed Master

CF Master/Slave Select

2-3 Install CPU

2-3-1 Glossary

Chipset (or core logic) – A highly integrated circuits which control the interfaces between the system processor, RAM, I/O devises, and adapter cards.
Processor slot/socket - the slot or socket used to mount the system processor on the motherboard.
Slot (AGP, PCI, ISA, RAM) - the slots used to mount adapter cards and system RAM.
PCI - **P**eripheral **C**omponent **I**nterconnect - a high speed interface for video cards, sound cards, network interface cards, and modems; runs at 33MHz.
ISA - **I**ndustry **S**tandard **A**rchitecture - a relatively low speed interface primarily used for sound cards and modems; runs at approx. 8MHz.
Serial Port - a low speed interface typically used for mouse and external modems.
Parallel Port - a low speed interface typically used for printers.
PS/2 - a low speed interface used for mouse and keyboards.
USB - **U**niversal **S**erial **B**us - a medium speed interface typically used for mouse, keyboards, scanners, and some digital cameras.

Sound (interface) - the interface between the sound card or integrated sound connectors and speakers, MIC, game controllers, and MIDI sound devices.
LAN (interface) - **L**ocal **A**rea **N**etwork - the interface to your local area network.
BIOS (**B**asic **I**nput/**O**utput **S**ystem) - the program logic used to boot up a computer and establish the relationship between the various components.
Driver - software, which defines the characteristics of a device for use by another device or other software.
Processor - the "**C**entral **P**rocessing **U**nit" (CPU); the principal integrated circuit used for doing the "computing" in "personal computer"
Front Side Bus Frequency - the working frequency of the motherboard, which is generated by the clock generator for CPU, DRAM and PCI BUS.
CPU L2 Cache - the flash memory inside the CPU, normally Intel P4 CPU has 512K or above, while Celeron will have 256K.

2-3-2 About VIA Eden ESP 10000

This motherboard provides with a build onboard VIA Eden 1000MHz embedded system platform processor. The VIA Eden ESP architecture and companion chips provide a x86-base solution, a highly compatible, high performance, cost efficiency and low power solution for embedded system application, utilizes 0.13 micron EBGA package technology, value added from the advanced EBGA packaging includes remarkable compactness, cost efficiency and excellent characteristics.

The CPU should have a cooling FAN attached to prevent overheating. If this is not the case, then make sure the CPU has a sufficient cooling to dissipate heat generate from the CPU.

WARNING! Be sure that there is sufficient air circulation across the processor's heatsink and CPU cooling FAN is working correctly, otherwise it may cause the processor and motherboard overheat and damage, you may install an auxiliary cooling FAN, if necessary.

2-4 Install Memory

This motherboard provides one 184-pin DIMM (**D**UAL **I**NLINE **M**EMORY **M**ODULES) sites for memory expansion available to maximum memory size of 1.0GB DDR SDRAM.

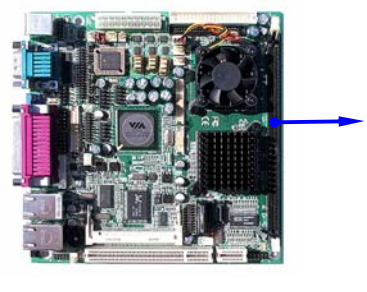
- Support 128Mb, 256Mb, 512Mb technologies implemented as x8, x16 devices.
- ECC, Non-ECC DIMMS.

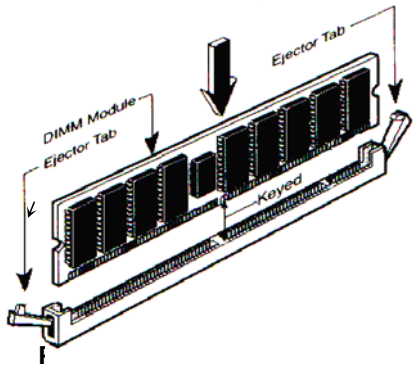
Valid Memory Configurations

Bank	184-Pin DIMM		Total Memory
Bank 0, 1 (DDR0)	DDR200 /DDR266 DDR SDRAM Module	X1	64MB~1.0GB
Total	System Memory (Max. 1.0GB)	1	64MB~1.0GB

NOTE! Make sure the installed memory are DDR266 SDRAM support 133MHz memory clock, otherwise the system may hang during startup. PC2100/ PC2700 DDR are recommended.

Generally, installing DDR SDRAM modules to your motherboard is very easy, refer to figure 2-4 to see what a 184-Pin DDR200/DDR266 SDRAM module looks like.





NOTE! When you install DIMM module fully into the DIMM socket the eject tab should be locked into the DIMM module very firmly and fit into its indention on both sides.

WARNING! For the DDR SDRAM CLOCK is set at 133MHz, use only DDR266-compliant DDR Modules. When this motherboard operate at 133Mhz, most system will not even boot if non-compliant modules are used because of the strict timing issues, if your SDR Modules are not DDR266-compliant, set the DDR SDRAM clock to 100MHz to ensure system stability.

2-5 Expansion Cards

WARNING! Turn off your power when adding or removing expansion cards or other system components. Failure to do so may cause severe damage to both your motherboard and expansion cards.

2-5-1 Procedure For Expansion Card Installation

1. Read the documentation for your expansion card and make any necessary hardware or software setting for your expansion card such as jumpers.
2. Remove your computer's cover and the bracket plate on the slot you intend to use.
3. Align the card's connectors and press firmly.
4. Secure the card on the slot with the screen you remove above.
5. Replace the computer system's cover.
6. Set up the BIOS if necessary.
7. Install the necessary software driver for your expansion card.

2-5-2 Assigning IRQs For Expansion Card

Some expansion cards need an IRQ to operate. Generally, an IRQ must exclusively assign to one use. In a standard design, there are 16 IRQs available but most of them are already in use.

Standard Interrupt Assignments

IRQ	Priority	Standard function
0	N/A	System Timer
1	N/A	Keyboard Controller
2	N/A	Programmable Interrupt
3 *	8	Communications Port (COM2)
4 *	9	Communications Port (COM1)
5 *	6	Sound Card (sometimes LPT2)
6 *	11	Floppy Disk Controller
7 *	7	Printer Port (LPT1)
8	N/A	System CMOS/Real Time Clock
9 *	10	ACPI Mode when enabled
10 *	3	IRQ Holder for PCI Steering
11 *	2	IRQ Holder for PCI Steering
12 *	4	PS/2 Compatible Mouse Port
13	N/A	Numeric Data Processor
14 *	5	Primary IDE Channel
15 *	1	Secondary IDE Channel

* These IRQs are usually available for ISA or PCI devices.

2-5-3 Interrupt Request Table For This Motherboard

Interrupt request are shared as shown the table below:

	INT A	INT B	INT C	INT D	INT E	INT F	INT G	INT H
Slot 1			√					
Slot 2				√				
Slot 3	√							
Mini-PCI		√						
Onboard VT6103 LAN 1								
Onboard LAN 2	√							

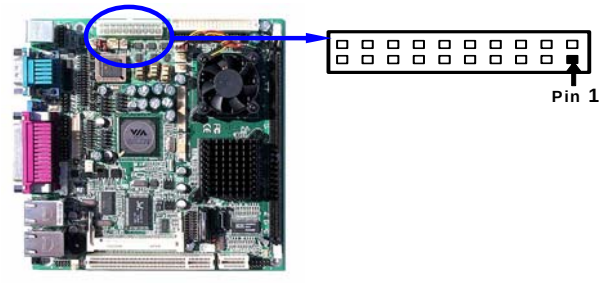
IMPORTANT! If using PCI cards on shared slots, make sure that the drivers support "Shared IRQ" or that the cards don't need IRQ assignments. Conflicts will arise between the two PCI groups that will make the system unstable or cards inoperable.

2-6 Connectors, Headers

2-6-1 Connectors

(1) Power Connector (20-pin block): ATXPWR

ATX Power Supply connector. This is a 20-pins connector that usually comes with ATX case. The ATX Power Supply allows to use soft power on with a momentary switch that connect from the front panel switch to 2-pins Power On jumper pole on the motherboard. When the power switch on the back of the ATX power supply turned on, the full power will not come into the system board until the front panel switch is momentarily pressed. Press this switch again will turn off the power to the system board.



PIN	ROW2	ROW1
1	3.3V	3.3V
2	-12V	3.3V
3	GND	GND
4	Soft Pwr On	5V
5	GND	GND
6	GND	5V
7	GND	GND
8	-5V	Power OK
9	+5V	+5V (for Soft Logic)
10	+5V	+12V

(2) PS/2 Mouse & PS/2 Keyboard Connector: PS2 KB/MOUSE

Connectors for PS/2 keyboard and PS/2 Mouse.

(3) USB Port connector: USB (USB1/ 2/ 3/ 4)

Connectors are 4-pin connector that connect USB devices to the system board.

(4) LAN Port connector: LAN

Connector is standard RJ45 connector for Network connector.

(5) Parallel Port Connector (25-pin female): LPT

Parallel Port connector is a 25-pin D-Subminiature Receptacle connector. The On-board Parallel Port can be disabled through the BIOS SETUP. Please refer to Chapter 3 "INTEGRATED PERIPHERALS SETUP" section for more detail information.

(6) Audio Connector :

This Connector are 2 phone Jack for LINE-OUT, MIC

Line-out : Audio output to speaker

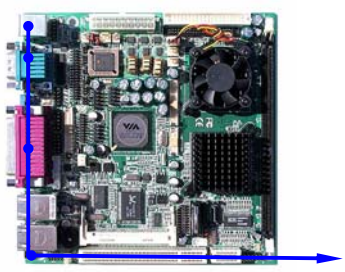
MIC : Microphone Connector

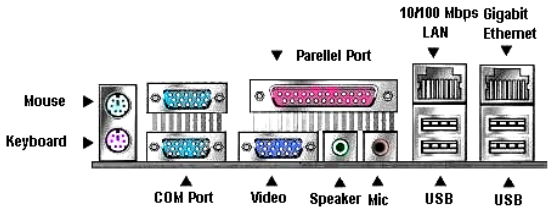
(7) VGA Connector (15-pin D-Sub) Connector: VGA

VGA is the 15-pin D-Subminiature female connector for display monitor.

(8) Serial Port COM1, COM2:

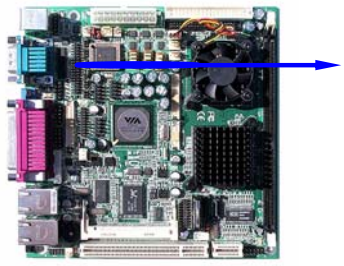
COM1, COM2 are the 9-pin D-Subminiature male connector. The On-board serial port can be disabled through BIOS SETUP. Please refer to Chapter 3 "INTEGRATED PERIPHERALS SETUP" section for more detail information.

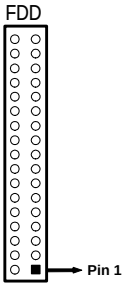




(9) Floppy drive Connector (34-pin block): FDD

This connector supports the provided floppy drive ribbon cable. After connecting the single plug end to motherboard, connect the two plugs at other end to the floppy drives.



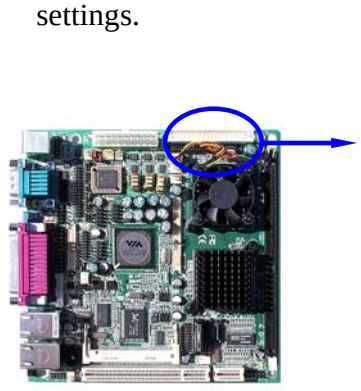


Floppy Drive Connector

Signal	Pin		Signal
GND	1	2	DRVDEN0#
GND	3	4	NC
GND	5	6	DRVDEN1#
GND	7	8	INDEX#
GND	9	10	MOA#
GND	11	12	DSB#
GND	13	14	DSA#
GND	15	16	MOB#
GND	17	18	DIR#
GND	19	20	STEP#
GND	21	22	WD#
GND	23	24	WE#
GND	25	26	TRAK0#
GND	27	28	WPT#
GND	29	30	RDATA#
GND	31	32	SIDE1#
GND	33	34	DSKCHG#

(10) Primary IDE Connector (40-pin block): IDE1 (CN10)

This connector supports the provided IDE hard disk ribbon cable. After connecting the single plug end to motherboard, connect the two plugs at other end to your hard disk(s). If you install two hard disks, you must configure the second drive to Slave mode by setting its jumpers accordingly. Please refer to the documentation of your hard disk for the jumper settings.

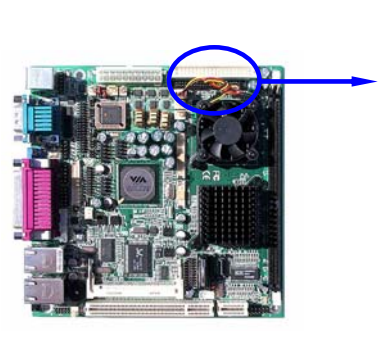


Primary IDE Connector

Signal	PIN	Signal	
GND	1	2	DACT#
DCS3#	3	4	DCS1#
DA2	5	6	DA0
NC	7	8	DA1
NC	9	10	IRQ14
GND	11	12	DACK#
GND	13	14	IORDY
GND	15	16	IOR#
GND	17	18	IOW#
GND	19	20	DREQ
NC	21	22	GND
D15	13	24	D0
D14	15	26	D1
D13	17	28	D2
D12	19	30	D3
D11	31	32	D4
D10	33	34	D5
D9	35	36	D6
D8	37	38	D7
GND	39	40	RESET#

(11) Secondary IDE Connector (44-pin block): IDE2 (CN3)

This connector connects to the next set of Master and Slave hard disks. Follow the same procedure described for the primary IDE connector. You may also configure two hard disks to be both Masters using one ribbon cable on the primary IDE connector and another ribbon cable on the secondary IDE connector.



Secondary IDE Connector

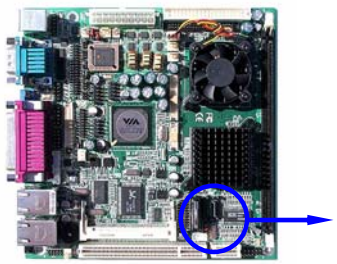
Signal	PIN	Signal	
GND	1	2	DACT#
DCS3#	3	4	DCS1#
DA2	5	6	DA0
NC	7	8	DA1
NC	9	10	IRQ14
GND	11	12	DACK#
GND	13	14	IORDY
GND	15	16	IOR#
GND	17	18	IOW#
GND	19	20	DREQ
NC	21	22	GND
D15	13	24	D0
D14	15	26	D1
D13	17	28	D2
D12	19	30	D3
D11	31	32	D4
D10	33	34	D5
D9	35	36	D6
D8	37	38	D7
GND	39	40	RESET#
VCC	41	42	VCC
GND	43	44	NC

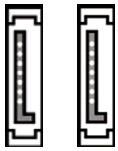
- Two hard disks can be connected to each connector. The first HDD is referred to as the “Master” and the second HDD is referred to as the “Slave”.

- For performance issues, we strongly suggest you don't install a CD-ROM or DVD-ROM drive on the same IDE channel as a hard disk. Otherwise, the system performance on this channel may drop.

(12) Serial ATA (CN2, CN4)

This connector supports Serial ATA device. After connecting the single plug end to motherboard, connect the plug at other end to the SATA device.

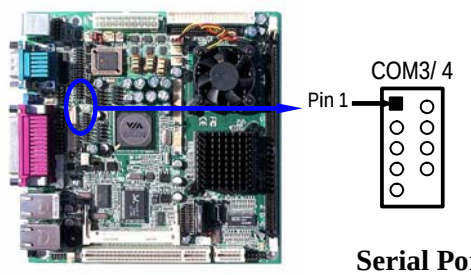




Pin	Signal
1	GND
2	TX+
3	TX-
4	GND
5	RX-
6	RX+
7	GND

2-6-2 Headers

(1) Serial Port COM3/ 4 Header (9-pin) : COM3 (CN26), COM4 (CN27)



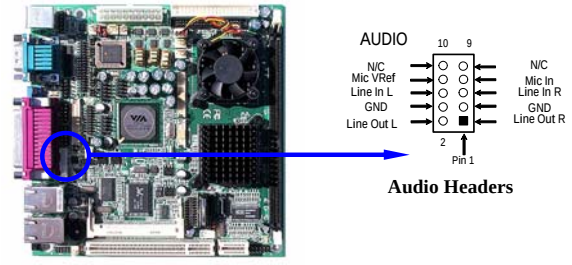
Signal	Pin		Signal
DCD	1	2	RxD
TxD	3	4	DTR
GND	5	6	DSR
RTS	7	8	CTS
RI	9	10	NC

Serial Port 3/ 4 COM3/4 Header

*COM 2, COM3 and COM4 pin 9 signal can be select as ring in, +5V or +12V.

2) Audio Header (9-pin): AUDIO (CN29)

This header connects to Front Panel Line-out, MIC connector with cable.

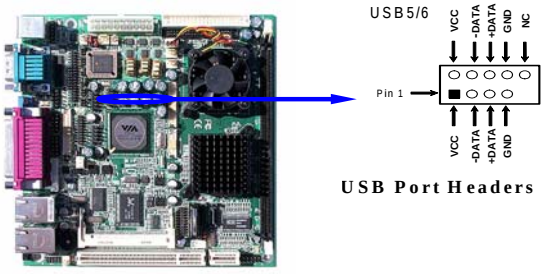


Audio Headers

Signal	Pin		Signal
Line Out R	1	2	Line Out L
GND	3	4	GND
Line In R	5	6	Line In L
Mic In	7	8	Mic VRef
NC	9	10	NC

(3) USB Port Headers (9-pin): USB 5/ 6 (CN18) and USB 7/ 8 (CN19)

These headers are used for connecting the additional USB port plug. By attaching an option USB cable, your can be provided with two additional USB plugs affixed to the back panel.

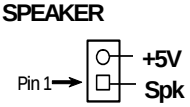


USB Port Headers

Signal	Pin		Signal
VCC	1	2	VCC
DATA-	3	4	DATA-
DATA+	5	6	DATA+
GND	7	8	GND
NC	9	10	Key

(4) External PC-speaker connector: SPEAKER (CN32)

This 2-pin connector connects to the case-mounted speaker. See the figure below.



(5) IDE Activity LED: IDE LED (CN1 1-3

This connector connects to the hard disk activity indicator light on the case.

(6) Reset switch lead: RESET (CN1 5-7)

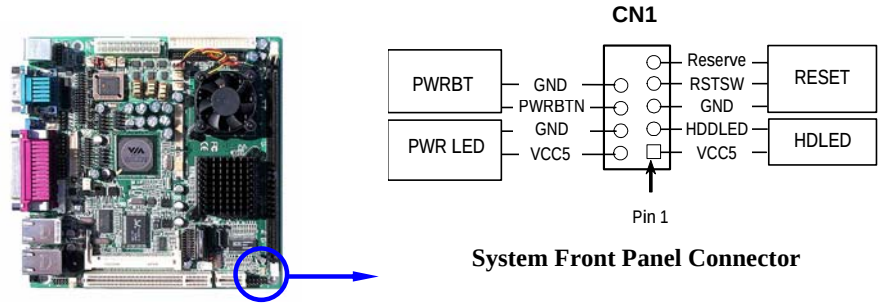
This 2-pin connector connects to the case-mounted reset switch for rebooting your computer without having to turn off your power switch. This is a preferred method of rebooting in order to prolong the lift of the system's power supply. See the figure below.

(7) Power LED (CN1 2-4)

The Power LED is light on while the system power is on. Connect the Power LED from the system case to this pin.

(8) Power switch: PWR BTN (CN1 6-8)

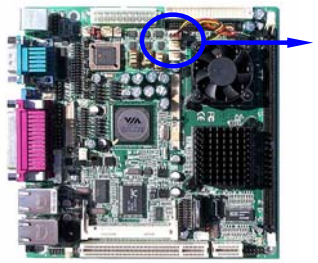
This 2-pin connector connects to the case-mounted power switch to power ON/OFF the system.



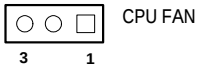
System Front Panel Connector

(9) FAN Speed Headers (3-pin): CPUFAN (CN6)

These connectors support cooling fans, depending on the fan manufacturer, the wire and plug may be different. The red wire should be positive, while the black should be ground.

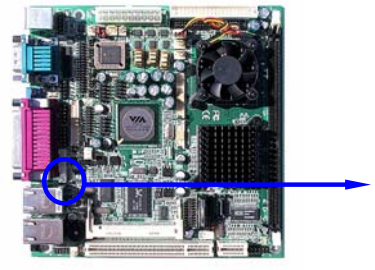


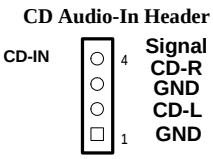
FAN Speed Headers



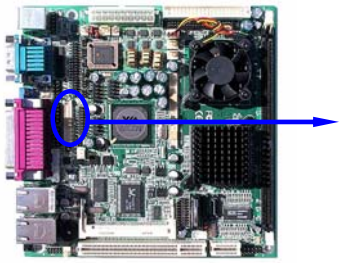
(10) CD Audio-In Headers (4-pin): CD-IN (CN31)

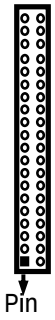
CDIN are the connectors for CD-Audio Input signal. Please connect it to CD-ROM CD-Audio output connector.





(11) LCD Panel and Inverter Header (40-pin): LVDS (CN28)





Signal name	Description
CLK2P, CLK1P	Positive LVDS differential clock2 & clock1
CLK2M, CLK1M	Negative LVDS differential closk2 & clock1
A[]P [0: 7]	Positive LVDS differential data
A[]M [0:7]	Negative LVDS differential data
VDDSAFE3	LCD backlight voltage +3.3V
VDDSAFE5	LCD backlight voltage +5V
GND	Ground
+12	+12V
SPCLK2	SMB/I2C Clocks, DDC communication to panel
SPD2	SMB/I2C Data, DDC communication to panel

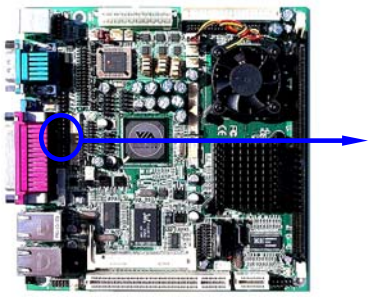
LCD Panel Connector

HIROSE DF-13-40DP-1.25V

Signal	Pin		Signal
VDD SAFE 3	1	2	VDD SAFE 3
VDD SAFE 5	3	4	VDD SAFE5
SPCLK2	5	6	SPD2
GND	7	8	GND
A1P	9	10	A0P
A1M	11	12	A0M
GND	13	14	GND
A3P	15	16	A2P
A3M	17	18	A2M
GND	19	20	GND
A5P	21	22	A4P
A5M	23	24	A4M
GND	25	26	GND
A7P	27	28	A6P
A7M	29	32	A6M
GND	31	32	GND
CLK2P	33	34	CLK1P
CLK2M	35	36	CLK1M
GND	37	38	GND
+12V	39	40	+12V

(12) LCD Panel

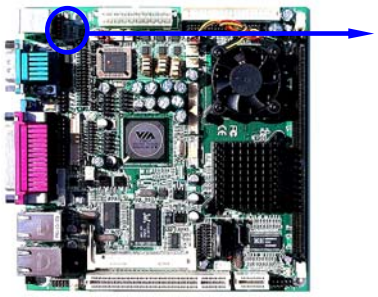
Power Header (CN30)



LCD-Inverter Connector

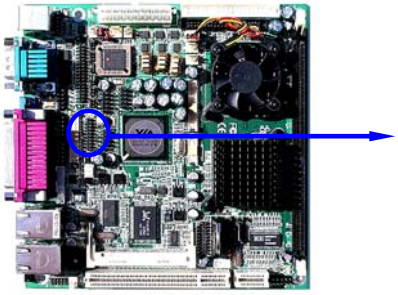
Pin	Signal
1	+12V
2	GND
3	ENBKL
4	VR
5	+5V

(13) IrDA Connector (CN25)



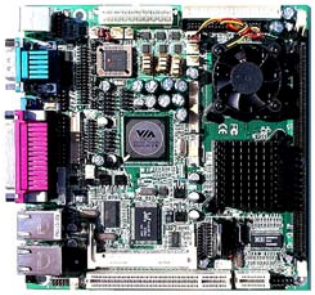
Signal	Pin
VCC	1
NC	2
IRRX	3
GND	4
IRTX	5

(14) LPC (CN22)

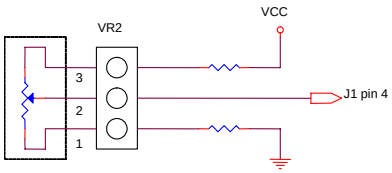


Signal	Pin		Signal
LAD0	1	2	LPCCLK
LAD1	3	4	GND
LAD2	5	6	LPCSIO
LAD3	7	8	PCIRSTX
LFRAME	9	10	NC
LDRQ	11	12	NI
LDRQ1	13	14	SMBCK
SERIRQ	15	16	SMBDT
GND	17	18	GND
+5V	19	20	+5V

(15) Brightness Adjust (CN23)

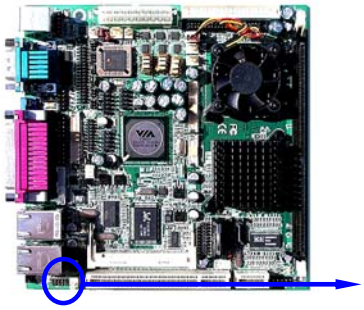


Signal	Pin
GND	1
VBR	2
VCC	3



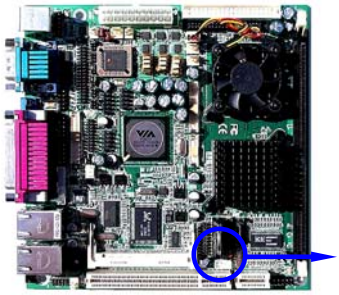
Variation Resistor (Recommended: 4.7K Ω , >1/16W)

(16) LAN LED Header (CN36)

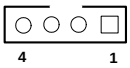


Signal	Pin		Signal
VCC3	1	2	VCC3
-SPEED 100	3	4	100 LED
VCC3	5	6	VCC3
-Activity	7	8	Active
GIG LED	9	10	VCC3

(17) SMBUS Header (CN5)



SMBUS Header



Pin	Signal
1	SMBUS Clock
2	SMBUS Data
3	Ground
4	+5V

(18) Auxiliary Power Connector (CN16)

Signal	PIN
VCCSB	3
VCC	2
PSON#	1

Warning: The MX266 is capable of use two type of power input, a standard ATX power supply or a single source 5V power supply, incase of using single 5V power source, all connector that provide 12V or 3.3V will no longer available (Example of 12V on PCI slot, LCD inverter and LCD panel connector etc.).

Note: Set CN16 to 2-3 closed. If 5V Single Voltage power supply is to be used

(19) AT/ATX Power Select (JP2)

You can use JP2 to select the power supply type. To use the single voltage 5V power set JP2 to 1-2 closed. Set JP2 to 2-3 closed (and CN16 to 2-3 closed), if ATX power supply is to be used.

5V/ATX Power Select (JP2)

Note: Set CN16 to 2-3 closed. If 5V Single Voltage power supply is to be used.

2-7 Starting Up Your Computer

1. After all connection is made, close your computer case cover.
2. Be sure all the switch are off, and check that the power supply input voltage is set to the local voltage, usually in-put voltage is 220V~240V or 110V~120V depending on your country's voltage used.
3. Connect the power supply cord into the power supply located on the back of your system case according to your system user's manual.
4. Turn on your peripheral as following order:
   a. Your monitor.
   b. Other external peripheral (Printer, Scanner, External Modem etc…)
   c. Your system power. For ATX power supplies, you need to turn on the power supply and press the ATX power switch on the front side of the case.
5. The power LED on the front panel of the system case will light. The LED on the monitor may light up or switch between orange and green after the system is on. If it complies with green standards or if it is has a power standby feature. The system will then run power-on test. While the test is running, the BIOS will alarm beeps or additional message will appear on the screen.

   If you do not see any thing within 30 seconds from the time you turn on the power. The system may have failed on power-on test. Recheck your jumper settings and connections or call your retailer for assistance.

Beep	**Meaning**
One short beep when displaying logo	No error during POST
Long beeps in an endless loop	No DRAM install or detected
One long beep followed by three short beeps	Video card not found or video card memory bad
High frequency beeps when system is working	CPU overheated System running at a lower frequency

6. During power-on, press <Del> key to enter BIOS setup. Follow the instructions in BIOS SETUP.
7. **Power off your computer:** You must first exit or shut down your operating system before switch off the power switch. For ATX power supply, you can press ATX power switching after exiting or shutting down your operating system. If you use Windows 9X, click **"Start"** button, click **"Shut down"** and then click **"Shut down the computer?"** The power supply should turn off after windows shut down.

Chapter 3

Introducing BIOS

The BIOS is a program located on a Flash Memory on the motherboard. This program is a bridge between motherboard and the operating system. When you start the computer, the BIOS program gain control. The BIOS first operates a self-diagnostic test called POST (Power On Self Test) for all the necessary hardware, it detects the entire hardware device and configures the parameters of the hardware synchronization. Only when these tasks are completed done it gives up control of the computer to operating system (OS). Since the BIOS is the only channel for hardware and software to communicate, it is the key factor for system stability, and in ensuring that your system performance as its best.

In the BIOS Setup main menu of Figure 3-1, you can see several options. We will explain these options step by step in the following pages of this chapter, but let us first see a short description of the function keys you may use here:

- Press <Esc> to quit the BIOS Setup.
- Press ↑↓←→ (up, down, left, right) to choose, in the main menu, the option you want to confirm or to modify.
- Press <F10> when you have completed the setup of BIOS parameters to save these parameters and to exit the BIOS Setup menu.
- Press Page Up/Page Down or +/– keys when you want to modify the BIOS parameters for the active option.

3-1 Entering Setup

Power on the computer and by pressing <Del> immediately allows you to enter Setup.

If the message disappears before your respond and you still wish to enter Setup, restart the system to try again by turning it OFF then ON or pressing the "RESET" button on the system case. You may also restart by simultaneously pressing <Ctrl>, <Alt> and <Delete> keys. If you do not press the keys at the correct time and the system does not boot, an error message will be displayed and you will again be asked to

Press <F1> to continue, <Ctrl-Alt-Esc> or <Del> to enter Setup

3-2 Getting Help

Main Menu

The on-line description of the highlighted setup function is displayed at the bottom of the screen.

Status Page Setup Menu/Option Page Setup Menu

Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window, press <Esc>.

3-3 The Main Menu

Once you enter Award® BIOS CMOS Setup Utility, the Main Menu (Figure 3-1) will appear on the screen. The Main Menu allows you to select from fourteen setup functions and two exit choices. Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.

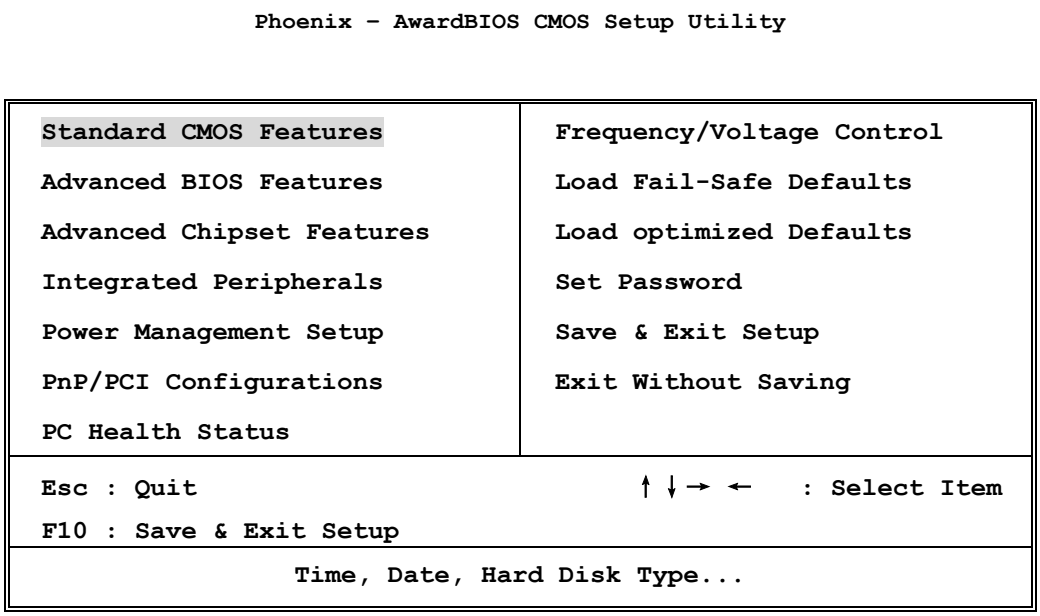


Figure 3-1

Standard CMOS Features

Use this Menu for basic system configurations.

Advanced BIOS Features

Use this menu to set the Advanced Features available on your system.

Advanced Chipset Features

Use this menu to change the values in the chipset registers and optimize your system's performance.

Integrated Peripherals

Use this menu to specify your settings for integrated peripherals.

Power Management Setup

Use this menu to specify your settings for power management.

PnP/PCI configurations

This entry appears if your system supports PnP/PCI.

PC Health Status

This entry shows your PC health status.

Frequency/Voltage Control

Use this menu to specify your settings for frequency clock control.

Load Optimized Defaults

Use this menu to load the BIOS default values that are settings for optimal performances system operations.

Load Standard Defaults

Use this menu to load the BIOS default values that are factory settings for the stable performance system operation.

Set User Password

Use this menu to set User Passwords.

Save & Exit Setup

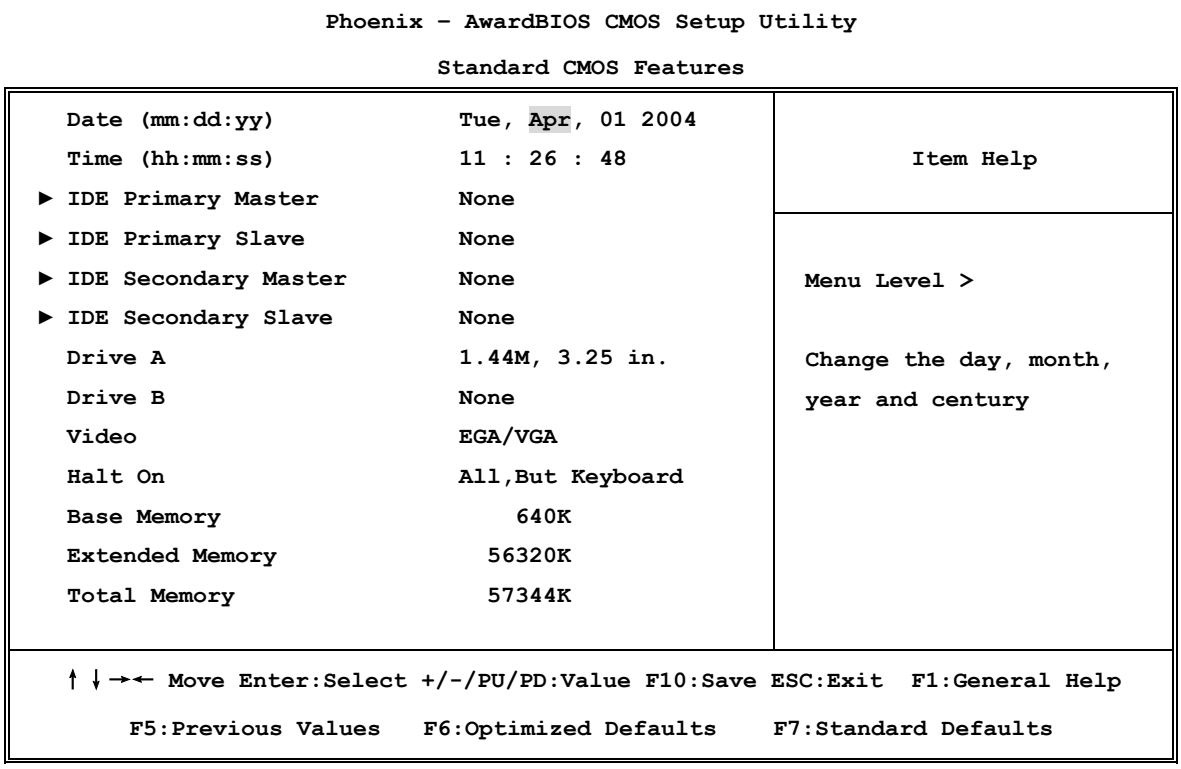
Save CMOS value changes to CMOS and exit setup.

Exit Without Saving

Abandon all CMOS value changes and exit setup.

3-4 Standard CMOS Features

The items in Standard CMOS Setup Menu are divided into several categories. Each category includes no, one or more than one setup items. Use the arrow keys to highlight the item and then use the <PgUp> or <PgDn> keys to select the value you want in each item.


Phoenix – AwardBIOS CMOS Setup Utility
Standard CMOS Features
Date (mm:dd:yy) Tue, Apr, 01 2004
Time (hh:mm:ss) 11 : 26 : 48
▶ IDE Primary Master None
▶ IDE Primary Slave None
▶ IDE Secondary Master None
▶ IDE Secondary Slave None
Drive A 1.44M, 3.25 in.
Drive B None
Video EGA/VGA
Halt On All,But Keyboard
Base Memory 640K
Extended Memory 56320K
Total Memory 57344K
Item Help
Menu Level >
Change the day, month, year and century
↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Optimized Defaults F7:Standard Defaults

Date

The date format is <day><month><date><year>.

Day Day of the week, from Sun to Sat, determined by BIOS. Read-only.

Month The month from Jan. through Dec.

Date The date from 1 to 31 can be keyed by numeric function keys.

Year The year depends on the year of the BIOS.

Time The time format is <hour><minute><second>.

Primary Master/Primary Slave

Secondary Master/Secondary Slave

Press PgUp/<+> or PgDn/<–> to select Manual, None, Auto type. Note that the specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information for this category. If your hard disk drive type is not matched or listed, you can use Manual to define your own drive type manually.

If you select Manual, related information is asked to be entered to the following items. Enter the information directly from the keyboard. This information should be provided in the documentation from your hard disk vendor or the system manufacturer.

If the controller of HDD interface is SCSI, the selection shall be “None”.

If the controller of HDD interface is CD-ROM, the selection shall be “None”

Access Mode The settings are Auto Normal, Large, and LBA.

Cylinder number of cylinders

Head number of heads

Precomp write precomp

Landing Zone landing zone

Sector number of sectors

3-5 Advanced BIOS Features

```
                    Phoenix – AwardBIOS CMOS Setup Utility
                          Advanced BIOS Features
```

Hard Disk Boot Priority	[Press Enter]	Item Help
Virus Warning	[Disabled]	
CPU Internal Cache	[Enabled]	
CPU L2 Cache ECC Checking	[Disabled]	
Quick Power On Self Test	[Enabled]	Menu Level >
First Boot Device	[Floppy]	
Second Boot Device	[Hard Disk]	
Third Boot Device	[CDROM]	
Boot other Device	[Enabled]	
Boot Up Floppy Seek	[Enabled]	
Boot Up NumLock Status	[On]	
Gate A20 Option	[Fast]	
Typematic Rate Setting	[Disabled]	
Typematic Rate (Chars/Sec)	6	
Typematic Delay (Msec)	250	
Security Option	[Setup]	
MPS Version Control For OS	[1.4]	
OS Select For DRAM > 64MB	[Non-OS2]	
Video BIOS Shadow	[Enabled]	
Small Logo <EPA> Show	[Disabled]	

```
↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  F1:General Help
    F5:Previous Values   F6:Optimized Defaults    F7:Standard Defaults
```

Hard Disk Boot Priority

Allow you to select Hard Disk boot Priority.

Virus Warning

Allows you to choose the VIRUS Warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempt to write data into this area, BIOS will show a warning message on screen and alarm beep.

Disabled (default) No warning message to appear when anything attempts to access the boot sector or hard disk partition table.

Enabled Activates automatically when the system boots up causing a warning message to appear when anything attempts to access the boot sector of hard disk partition table.

CPU Internal Cache

The default value is Enabled.

Enabled (default) Enable cache

Disabled Disable cache

Note: The internal cache is built in the processor.

External Cache

Choose Enabled or Disabled. This option enables the Level 2 cache memory.

CPU L2 Cache ECC Checking

Choose Enabled or Disabled. This option enables the Level 2 cache memory ECC (error check correction).

Quick Power On Self Test

This category speeds up Power On Self Test (POST) after you power on the computer. If this is set to Enabled. BIOS will shorten or skip some check items during POST.

Enabled (default) Enable quick POST

Disabled Normal POST

First/Second/Third/Other Boot Device

The BIOS attempts to load the operating system from the devices in the sequence selected in these items. The settings are Floppy, LS/ZIP, HDD-0/HDD-1/HDD-3, SCSI, CDROM, LAD and Disabled.

Boot Up Floppy Seek

During POST, BIOS will determine if the floppy disk drive installed is 40 or 80 tracks. 360K type is 40 tracks while 760K, 1.2M and 1.44M are all 80 tracks.

Boot Up NumLock Status

The default value is On.

On (default) Keypad is numeric keys.

Off Keypad is arrow keys.

Gate A20 Option

Normal The A20 signal is controlled by keyboard controller or chipset hardware.

Fast (default) The A20 signal is controlled by port 92 or chipset specific method.

Typematic Rate Setting

Keystrokes repeat at a rate determined by the keyboard controller. When enabled, the typematic rate and typematic delay can be selected. The settings are: Enabled/Disabled.

Typematic Rate (Chars/Sec)

Sets a number of times to repeat a keystroke in a second when you hold the key down. The settings are: 6, 8, 10, 12, 15, 20, 24, and 30.

Typematic Delay (Msec)

Sets the delay time after the key is held down before is begins to repeat the keystroke. The settings are 250, 500, 750, and 1000.

Security Option

This category allows you to limit access to the system and Setup, or just to Setup.

System	The system will not boot and access to Setup will be denied if the correct password is not entered at the prompt.
Setup (default)	The system will boot, but access to Setup will be denied if the correct password is not entered prompt.

OS Select For DRAM > 64MB

Allows OS2® to be used with >64MB or DRAM. Settings are Non-OS/2 (default) and OS2. Set to OS/2 if using more than 64MB and running OS/2.

Video BIOS Shadow

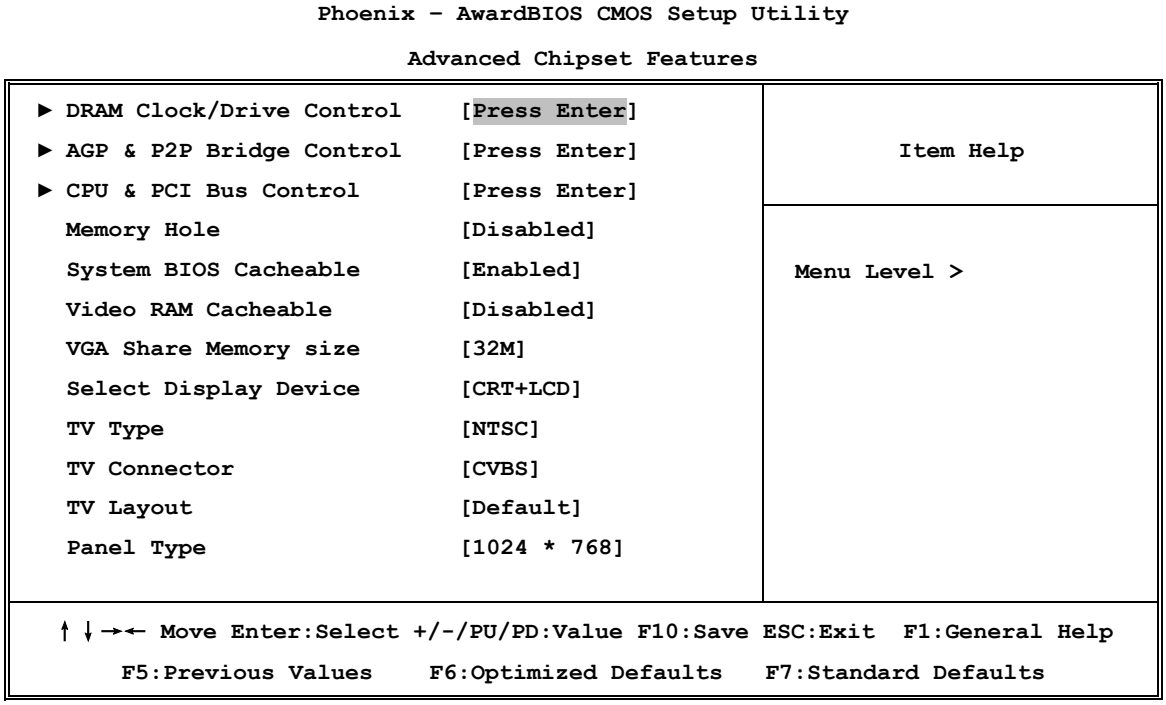
Allows you to Enable or Disable video BIOS caching to system memory.

Small logo(EPA) Show

Allows you to Enable or Disable the EPA logo when system start.

3-6 Advanced Chipset Features

The Advanced Chipset Features Setup option is used to change the values of the chipset registers. These registers control most of the system options in the computer.


Phoenix – AwardBIOS CMOS Setup Utility
Advanced Chipset Features
► DRAM Clock/Drive Control [Press Enter]
► AGP & P2P Bridge Control [Press Enter]
► CPU & PCI Bus Control [Press Enter]
Memory Hole [Disabled]
System BIOS Cacheable [Enabled]
Video RAM Cacheable [Disabled]
VGA Share Memory size [32M]
Select Display Device [CRT+LCD]
TV Type [NTSC]
TV Connector [CVBS]
TV Layout [Default]
Panel Type [1024 * 768]
Item Help
Menu Level >
↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Optimized Defaults F7:Standard Defaults

DRAM Clock/Drive Control
Please refer to section 3-6-1

AGP & P2P Bridge Control
Please refer to section 3-6-2

CPU & PCI Bus Control
Please refer to section 3-6-2

Memory Hole
You can reserve this area of system memory for ISA adapter ROM. When this area is reserved, it cannot be cached. The user information of peripherals that need to use this area of system memory usually discusses their memory requirements. The settings are: Enabled and Disabled.

System BIOS Cacheable
Selecting Enabled allows caching of the system BIOS ROM at F0000h-FFFFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result. The settings are: Enabled and Disabled.

Video RAM Cacheable
Select Enabled allows caching of the video BIOS, resulting in better system performance. However, if any program writes to this memory area, a system error may result. The settings are: Enabled and Disabled.

VGA Share Memory Size

In this item you can assign video memories size share from the system memories, available options are 16, 32, 64.

Select Display Device

Allow you to select type of display CRT, LCD, DVI, TV.

TV_Type

Allow you to select TV standard NTSC, PAL…

TV_Connector

Allow you to select type of TV connector SVideo, RGB, CVBS, SDTV…

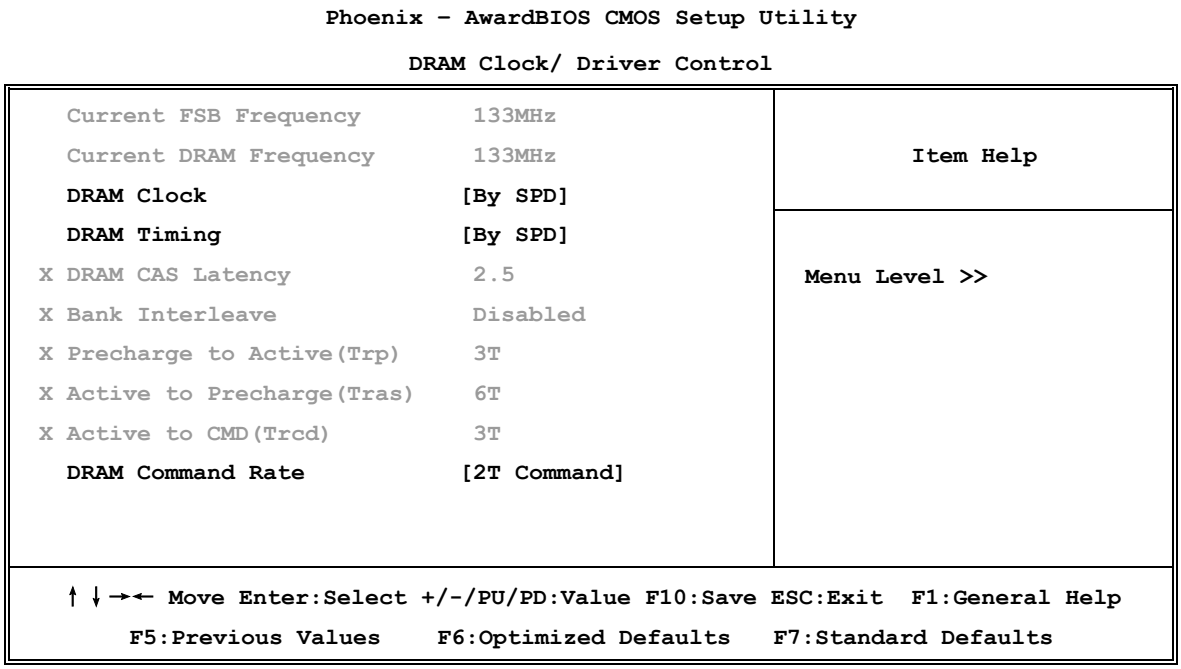
TV_Layout

Allow you to select type of display Component, RGB, SVideo...

Panel Type

Allow you to select different type of LCD panel resolution 640x480, 800x600, 1024x768...

3-6-1 DRAM Clock/ Driver Control Settings


Phoenix – AwardBIOS CMOS Setup Utility
DRAM Clock/ Driver Control
Current FSB Frequency 133MHz
Current DRAM Frequency 133MHz
DRAM Clock [By SPD]
DRAM Timing [By SPD]
X DRAM CAS Latency 2.5
X Bank Interleave Disabled
X Precharge to Active(Trp) 3T
X Active to Precharge(Tras) 6T
X Active to CMD(Trcd) 3T
DRAM Command Rate [2T Command]
Item Help
Menu Level >>
↑ ↓ →← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Optimized Defaults F7:Standard Defaults

DRAM Clock

When “By SPD” has been select, BIOS will read SDRAM module SPD information pre-define by memory module manufacture or select a 133MHz memory clock.

DRAM Timing

When "By SPD" has been select, BIOS will read SDRAM module SPD information pre-define by memory module manufacture.

SDRAM CAS Latency

When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing. The settings are: 2T and 2.5T.

Note: Change these settings only if you are familiar with the chipset.

SDRAM RAS# to CAS# Delay

This field let's you insert a timing delay between the CAS and RAS strobe signals, used when DRAM is written to, read from, or refreshed. *Fast* gives faster performance; and *Slow* gives more stable performance. This field applies only when synchronous DRAM is installed in the system. The settings are: 2T, 3T and 4T.

SDRAM RAS# Precharge Time

If an insufficient number of cycles is allowed for the RAS to accumulate its charge before DRAM refresh, the refresh may be incomplete and the DRAM may fail to retain date. *Fast* gives faster performance; and *Slow* gives more stable performance. This field applies only when synchronous DRAM is installed in the system. The settings are: 2T, 3T and 4T.

3-6-2 AGP & P2P Bridge Control Settings

```
                    Phoenix – AwardBIOS CMOS Setup Utility
                          AGP 7 P2P Bridge Control
```

AGP Aperture Size	[64M]	Item Help
AGP Driving Control	[Auto]	
X AGP Driving Value	DA	
AGP Fast Write	[Disabled]	Menu Level >>
AGP Master 1 WS Write	[Disabled]	
AGP Master 1 WS Read	[Disabeld]	

↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Optimized Defaults F7:Standard Defaults

AGP Aperture Size

This function determines the amount of system memory that is given to the AGP. Options available range from 4MB to 256MB. This is a dynamic memory allotment in the AGP video will only use the amount of memory that it needs. The remaining memory not in use will be available for the system to use.

AGP Driving Control

This item allows you to adjust the AGP driving force. Choose Manual to key in an AGP Driving Value in the next selection. This field is recommended to set in Auto to avoid any error in your system.

AGP Driving Value

This item allows you to adjust the AGP driving force. The choices are: Min=00 to Max=FF.

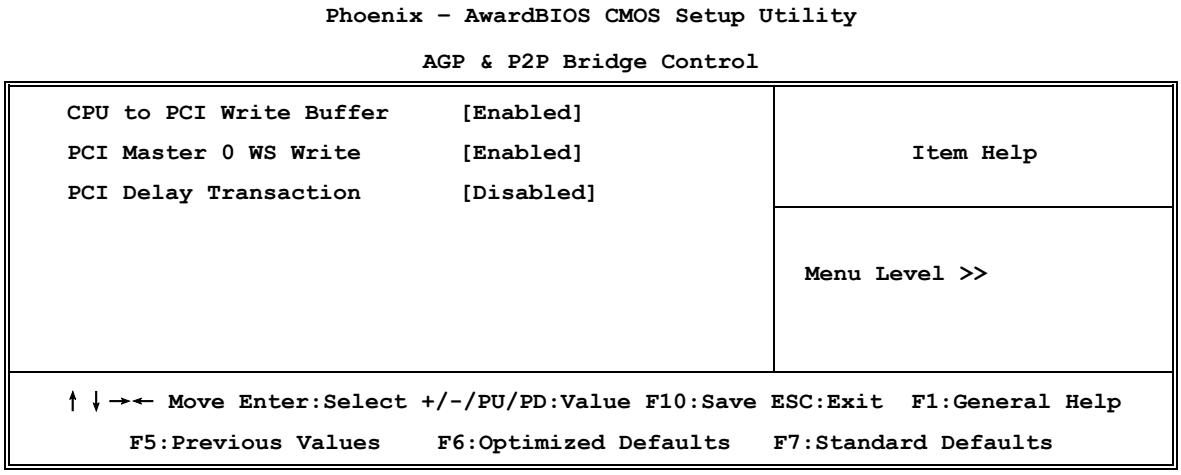
AGP Master 1 WS Write

When enabled, writes to the AGP is executed with one wait state. Available options Enabled or Disabled.

AGP Master 1 WS read

When enabled, reads to the AGP is executed with on wait state. Available options Enabled or Disabled.

3-6-3 CPU & PCI Bus Control Settings


Phoenix – AwardBIOS CMOS Setup Utility
AGP & P2P Bridge Control
CPU to PCI Write Buffer [Enabled]
PCI Master 0 WS Write [Enabled]
PCI Delay Transaction [Disabled]
Item Help
Menu Level >>
↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Optimized Defaults F7:Standard Defaults

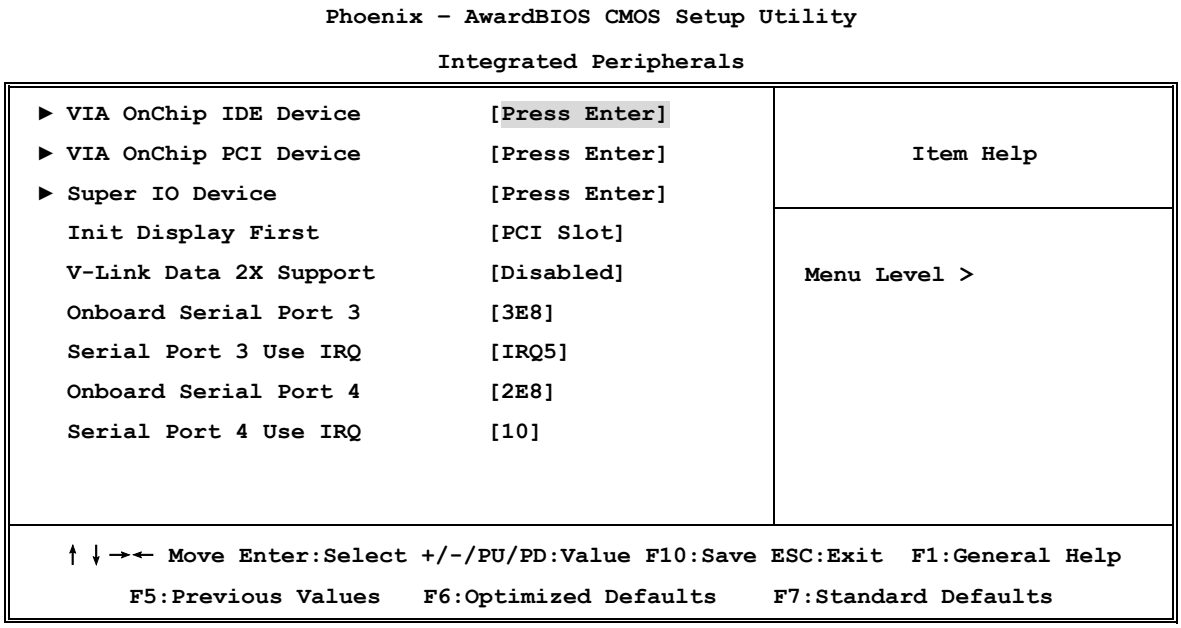
CPU to PCI Write Buffer

When this field is enabled, write from the CPU to the PCI bus is buffered, to compensate for the speed differences between CPU and the PCI bus. When disabled, the writes are not buffered and the CPU must wait until the write is complete before starting another write cycle.

PCI Delay Transaction

This chipset has an embedded 32-bit posted write buffer to support delay transaction cycles. Select Enabled to support compliance with PCI specification version 2.1. Available choices are: Enabled or Disabled.

3-7 Integrated Peripherals


Phoenix – AwardBIOS CMOS Setup Utility
Integrated Peripherals
► VIA OnChip IDE Device [Press Enter]
► VIA OnChip PCI Device [Press Enter]
► Super IO Device [Press Enter]
Init Display First [PCI Slot]
V-Link Data 2X Support [Disabled]
Onboard Serial Port 3 [3E8]
Serial Port 3 Use IRQ [IRQ5]
Onboard Serial Port 4 [2E8]
Serial Port 4 Use IRQ [10]
Item Help
Menu Level >
↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Optimized Defaults F7:Standard Defaults

VIA OnChip IDE Device

Please refer to section 3-7-1

VIA OnChip PCI Device

Please refer to section 3-7-2

Super IO Device

Please refer to section 3-7-3

Init Display First

This item allows you to decide to activate whether PCI Slot or AGP VGA first. The settings are: PCI Slot, AGP Slot.

V-Link Data 2X Support

This item allows you to enabled 2x data transfer between Northbridge to Southbridge V-Link bus.

Onboard Serial Port 3 /4

This item allows you to select serial port I/O address.

Serial Port 3/ 4 use IRQ

This item allows you to select serial port IRQ.

3-7-1 VIA OnChip IDE Device Settings

```
                    Phoenix – AwardBIOS CMOS Setup Utility
                              VIA OnChip IDE Device
```

OnChip SATA	[Disabled]	Item Help
X SATA Mode	RAID	
OnChip IDE Channel0	[Enabled]	
OnChip IDE Channel1	[Enabled]	Menu Level >>
IDE Prefetch Mode	[Enabled]	
Primary Master PIO	[Auto]	
Primary Slave PIO	[Auto]	
Secondary Master PIO	[Auto]	
Secondary Slave PIO	[Auto]	
Primary Master UDMA	[Auto]	
Primary Slave UDMA	[Auto]	
Secondary Master UDMA	[Auto]	
Secondary Slave UDMA	[Auto]	
IDE HDD Block Mode	[Enabled]	

```
↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  F1:General Help
    F5:Previous Values   F6:Optimized Defaults    F7:Standard Defaults
```

OnChip SATA

This item allow you to enabled or disable the onboard SATA function.

SATA Mode

This item allow you to select SATA mode, available option are IDE and RAID.

OnChip IDE Channel 1

The integrated peripheral controller contains an IDE interface with support for two IDE channels. Select *Enabled* to activate each channel separately. Available option is: Enabled and Disabled.

Primary/Secondary Master/Slave PIO

The four IDE PIO (Programmed Input/Output) fields let you set a PIO mode (0-4) for each of the four IDE devices that the onboard IDE interface supports. Modes 0 through 4 provide successively increased performance. In Auto mode, the system automatically determines the best mode for each device. The settings are: Auto, Mode 0, Mode 1, Mode 2, Mode 3, and Mode 4.

Primary/Secondary Master/Slave UDMA

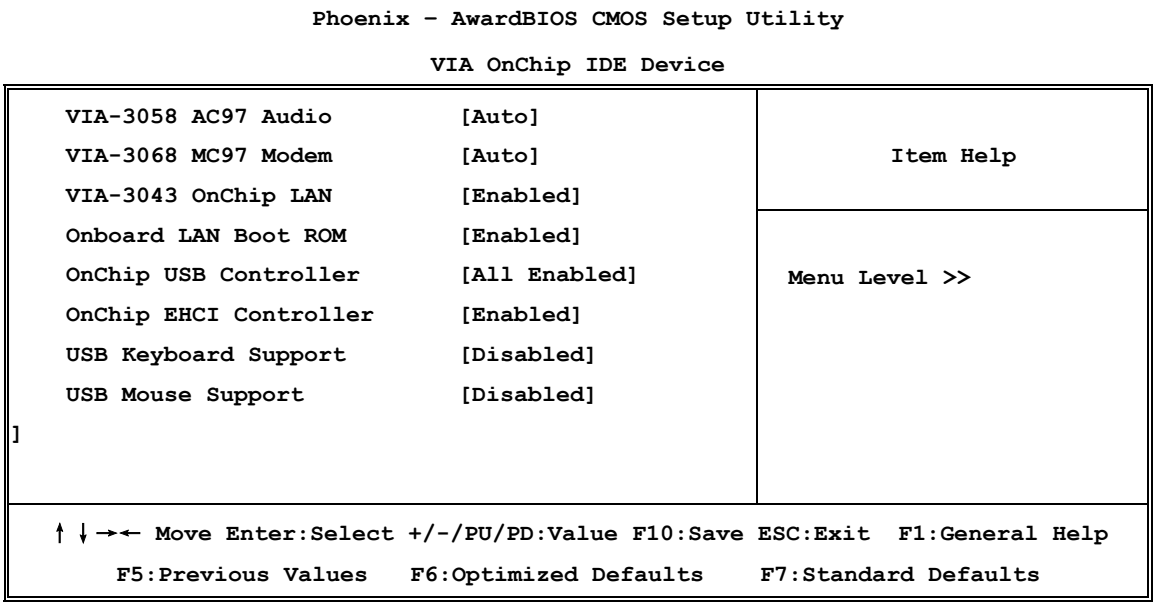
Ultra DMA/33 implementation is possible only if your IDE hard drive supports it and the operating environment includes a DMA driver (Windows 95 OSR2 or a third-party IDE bus

master driver). If your hard drive and your system software both support Ultra DMA/33 and Ultra DMA/66, select Auto to enable BIOS support. The settings are: Auto, Disabled.

IDE HDD Block Mode

Block mode is also called block transfer, multiple commands, or multiple sectors read/write. If your IDE hard drive supports block mode (most new drives do), select Enabled for automatic detection of the optimal number of block read/writes per sector the drive can support. The settings are: Enabled, Disabled.

3-7-2 VIA OnChip PCI Device Settings


Phoenix – AwardBIOS CMOS Setup Utility
VIA OnChip IDE Device
VIA-3058 AC97 Audio [Auto]
VIA-3068 MC97 Modem [Auto]
VIA-3043 OnChip LAN [Enabled]
Onboard LAN Boot ROM [Enabled]
OnChip USB Controller [All Enabled]
OnChip EHCI Controller [Enabled]
USB Keyboard Support [Disabled]
USB Mouse Support [Disabled]
]
Item Help
Menu Level >>
↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Optimized Defaults F7:Standard Defaults

VIA-3058 AC97 Audio

This item allow you to enable/ disable the chipset family to support AC97 audio. Available option are Auto and Disabled.

VIA-3068 MC97 Modem

This item allow you to enable/ disable the VT8237 chipset family to support AC97 Modem. Available option are Auto and Disabled.

VIA-3043 Onchip LAN

This item allow you to decide to enable/ disable the Onchip LAN Controller. Available option are Enabled and Disabled

Onboard LAN Boot ROM

This item allow you to enable/ disable the Onchip LAN boot ROM for boot from LAN function . Available option are Enabled and Disabled.

OnChip USB Controller

This item allows you to enable/ disable the Onchip USB controller. Available option are All Enabled, All Disabled, USB Port 1 & 2, USB Port 1 & 2 & 3, USB Port 1 & 3, and USB Port 1 Only.

OnChip EHCI Controller

This item allows you to enable/ disable USB 2.0 function.
Available option are Enabled and Disabled

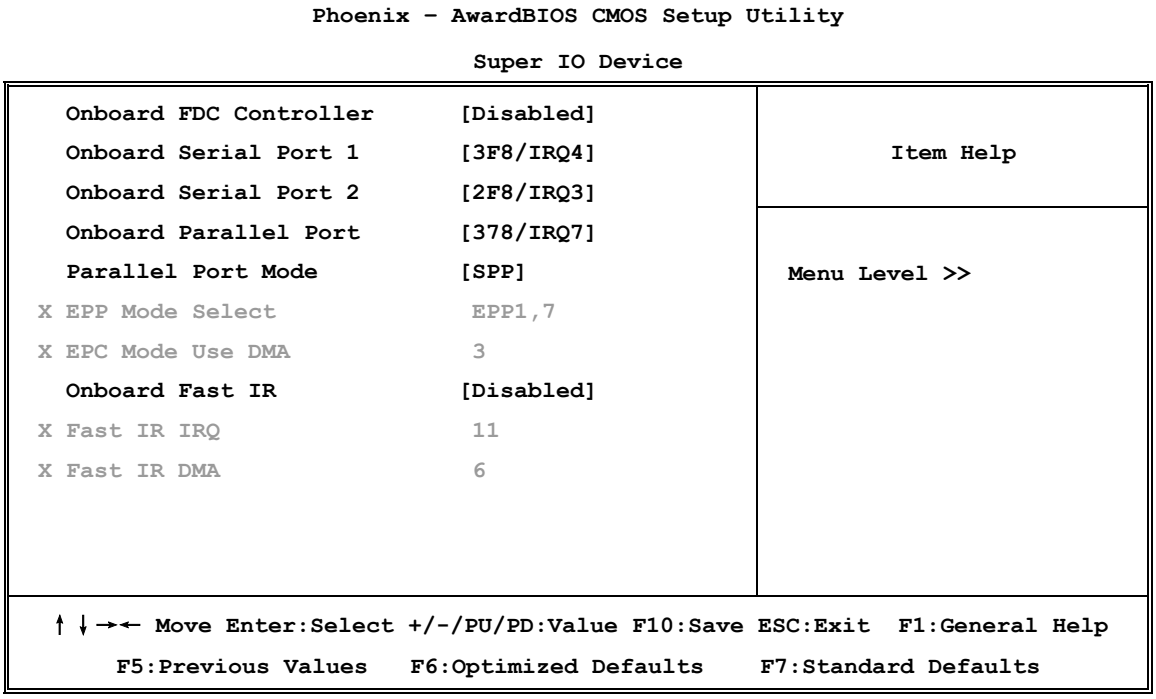
USB Keyboard support

This item allows you to enable/ disable legacy USB Keyboard function.
Available option are Enabled and Disabled

USB Mouse support

This item allows you to enable/ disable legacy USB Mouse function.
Available option are enabled and Disabled

3-7-3 Super IO Device Settings


Phoenix – AwardBIOS CMOS Setup Utility
Super IO Device
Onboard FDC Controller [Disabled]
Onboard Serial Port 1 [3F8/IRQ4]
Onboard Serial Port 2 [2F8/IRQ3]
Onboard Parallel Port [378/IRQ7]
Parallel Port Mode [SPP]
X EPP Mode Select EPP1,7
X EPC Mode Use DMA 3
Onboard Fast IR [Disabled]
X Fast IR IRQ 11
X Fast IR DMA 6
Item Help
Menu Level >>
↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Optimized Defaults F7:Standard Defaults

Onboard FDC Controller

This item allows you to enable/ disable onboard floppy disk controller function.
Available option are Enabled and Disabled

Onboard Serial Port 1

This item allows you to select the serial port 1 I/O/ IRQ to be used.

Onboard Serial Port 2

This item allows you to select the serial port 2 I/O/ IRQ to be used.

Onboard Parallel Port

There is a built-in parallel port on the on-board Super I/O chipset that Provides Standard, ECP, and EPP features. It has the following option:

Disabled	
(3BCH/IRQ7)/	Line Printer port 0
(278H/IRQ5)/	Line Printer port 2
(378H/IRQ7)	Line Printer port 1

Parallel Port Mode

SPP : Standard Parallel Port

EPP : Enhanced Parallel Port

ECP : Extended Capability Port

SPP/EPP/ECP/ECP+EPP

To operate the onboard parallel port as Standard Parallel Port only, choose "SPP." To operate the onboard parallel port in the EPP modes simultaneously, choose "EPP." By choosing "ECP", the onboard parallel port will operate in ECP mode only. Choosing "ECP+EPP" will allow the onboard parallel port to support both the ECP and EPP modes simultaneously. The ECP mode has to use the DMA channel, so choose the onboard parallel port with the ECP feature. After selecting it, the following message will appear: "ECP Mode Use DMA" at this time, the user can choose between DMA channels 3 to 1. The onboard parallel port is EPP Spec. compliant, so after the user chooses the onboard parallel port with the EPP function, the following message will be displayed on the screen: "EPP Mode Select." At this time either EPP 1.7 spec. or EPP 1.9 spec. can be chosen.

Parallel Port Mode

This item allows you to select the parallel port mode to be used.
Available select are SPP, EPP and ECP.

Onboard Fast IR

This item allows you to Enabled or Disabled the onboard IRDA function.
Available option: Enable and Disabled.

3-8 Power Management Setup

The Power Management Setup allows you to configure your system to most effectively save energy saving while operating in a manner consistent with your own style of computer use.

```
CMOS Setup Utility – Copyright(C) 1984-2002 Award Software

                    Power Management Setup

  ACPI Function                  [Enable]          |  Item Help
  Power Management Option        [User Define]     |
  HDD Power Down                 [Disabled]        |
  Suspend Mode                   [Disabled]        |
  Video Off Option               [Suspend=> Off]   |  Menu Level >
  Video Off Method               [V/H SYNC+ Blank] |
  MODEM Use IRQ                  [3]               |
  Soft-off by PWR-BTTN           [Instant-off]     |
  AC Loss Auto Restart           [Auto]            |
► IRQ/ Event Activity Detect     [Press Enter]     |

  ↑ ↓ →← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  F1:General Help
      F5:Previous Values    F6:Optimized Defaults   F7:Standard Defaults
```

ACPI Function

This item allows you to Enabled/Disabled the Advanced Configuration and Power Management (ACPI). Available settings are Enabled and Disabled.

Power Management Option

The available selection for the Power Management is User's Define, Minimum Saving and Maximum Saving.

HDD Power Down

This item allow you to select to power down HDD when system enter power saving mode.

Available settings are Enabled and Disabled.

Video Off Option

This determines the manner in which the monitor is blanked. The choices are Yes → Video will off, and No→ Video always On.

Video Off Method

This determines the manner in which the monitor is blanked.

DPMS (default)	Initial display power management signaling.
Blank Screen	This option only writes blanks to the video buffer.
V/H SYNC+Blank	This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.

Modem Use IRQ

This determines the IRQ in which the MODEM can use.

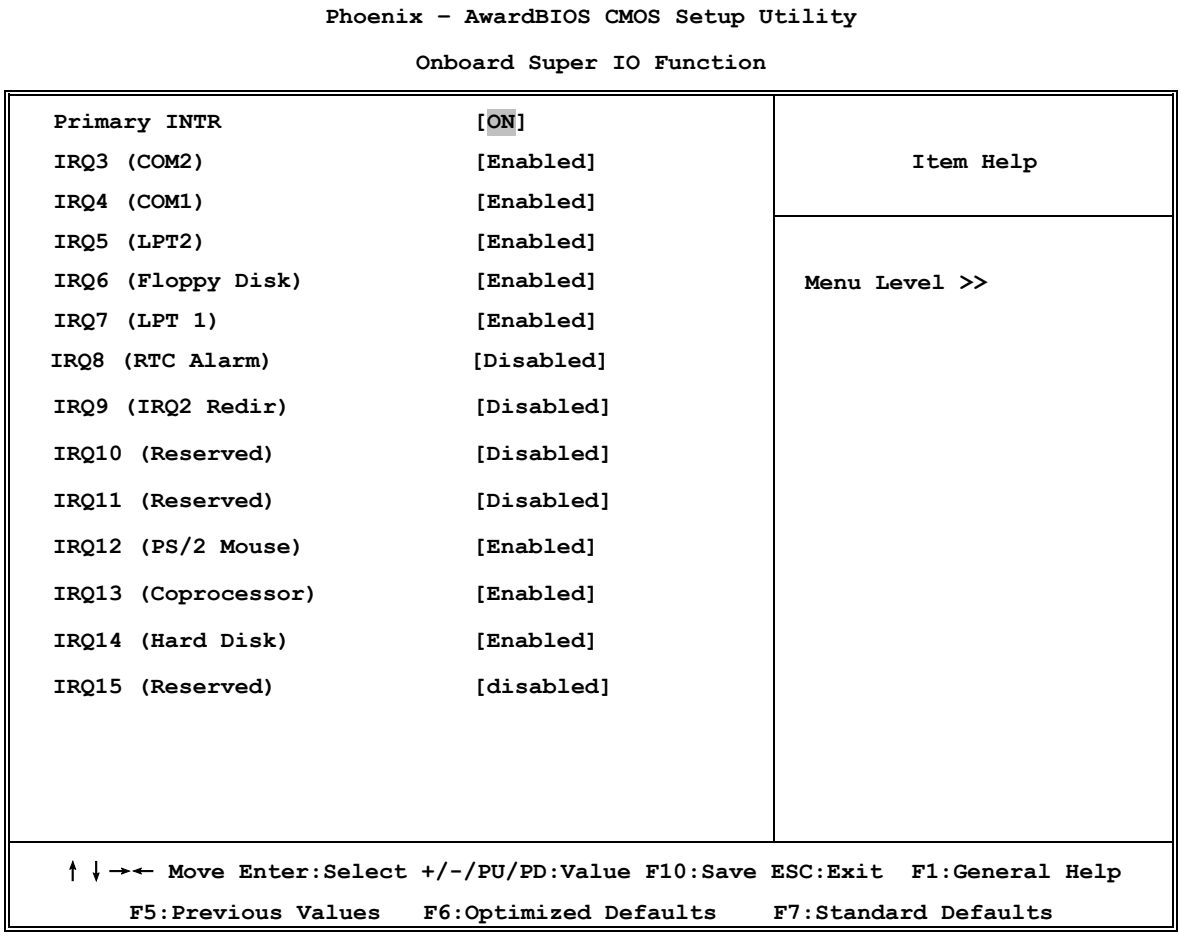
The settings are: 3, 4, 5, 7, 9, 10, 11, NA.

Power Button Function

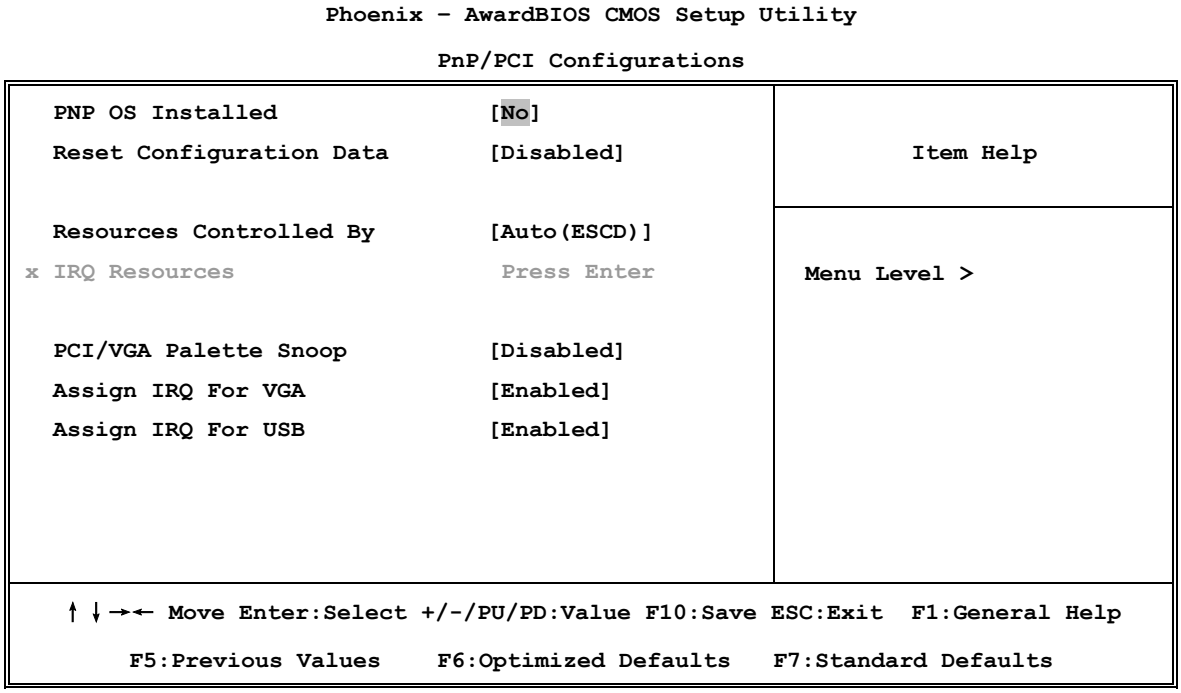
Pressing the power button for more than 4 seconds forces the system to enter the Soft-Off state. The settings are: Delay 4 Sec, Instant-Off.

3-8-1 IRQs Activity Monitoring

The IRQs Activity Monitoring Setup allows you to configure your system to monitor onboard device activity for system to exit power saving mode.



3-9 PnP/PCI Configuration Setup


Phoenix – AwardBIOS CMOS Setup Utility
PnP/PCI Configurations
PNP OS Installed [No]
Reset Configuration Data [Disabled]
Resources Controlled By [Auto(ESCD)]
x IRQ Resources Press Enter
PCI/VGA Palette Snoop [Disabled]
Assign IRQ For VGA [Enabled]
Assign IRQ For USB [Enabled]
Item Help
Menu Level >
↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Optimized Defaults F7:Standard Defaults

Reset Configuration Data
Normally, you leave this field Disabled. Select Enabled to reset Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the operating system can not boot. The settings are: Enabled and Disabled.

Resource Controlled By
The Award Plug and Play BIOS has the capacity to automatically configure all of the boot and Plug and Play compatible devices. However, this capability means absolutely nothing unless you are using a Plug and Play operating system such as Windows®95/98. If you set this field to "manual" choose specific resources by going into each of the sub menu that follows this field (a sub menu is preceded by a ">").

The settings are: Auto (ESCD), Manual.

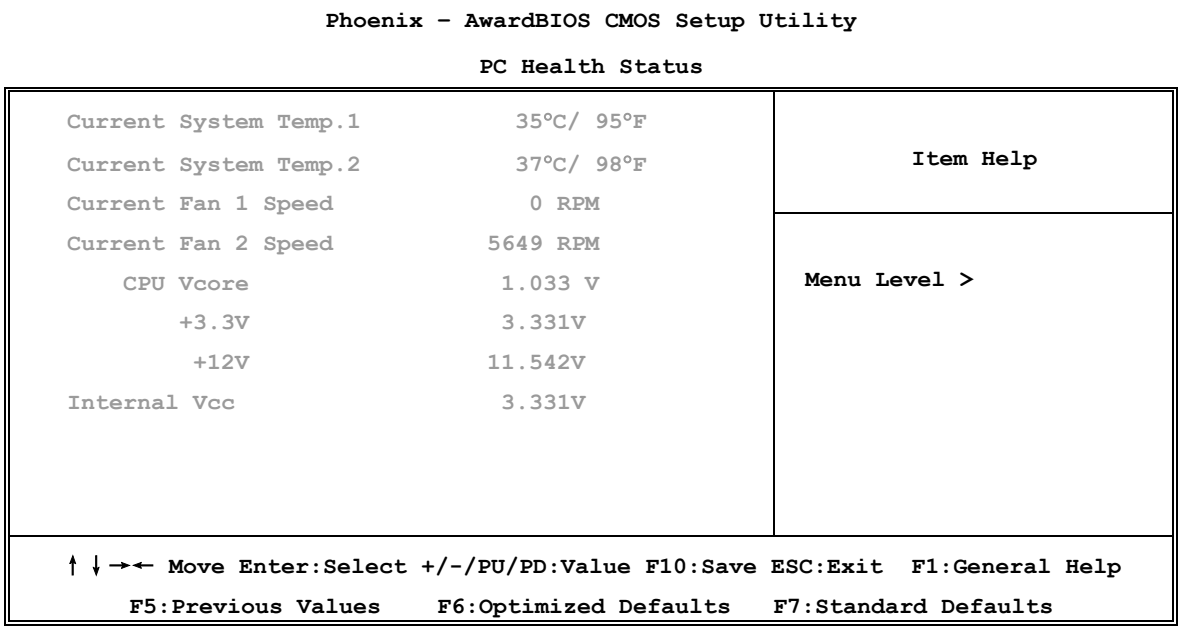
IRQ Resources
When resources are controlled manually, assign each system interrupt a type, depending on the type of device using the interrupt.

PCI/VGA Palette Snoop

Leave this field at *Disabled.* The settings are Enabled, Disabled.

3-10 PC Health Status

This section shows the Status of you CPU, Fan, Warning for overall system status. This is only available if there is Hardware Monitor onboard.


Phoenix – AwardBIOS CMOS Setup Utility
PC Health Status
Current System Temp.1 35°C/ 95°F
Current System Temp.2 37°C/ 98°F
Current Fan 1 Speed 0 RPM
Current Fan 2 Speed 5649 RPM
CPU Vcore 1.033 V
+3.3V 3.331V
+12V 11.542V
Internal Vcc 3.331V
Item Help
Menu Level >
↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Optimized Defaults F7:Standard Defaults

Show PC Health in Post

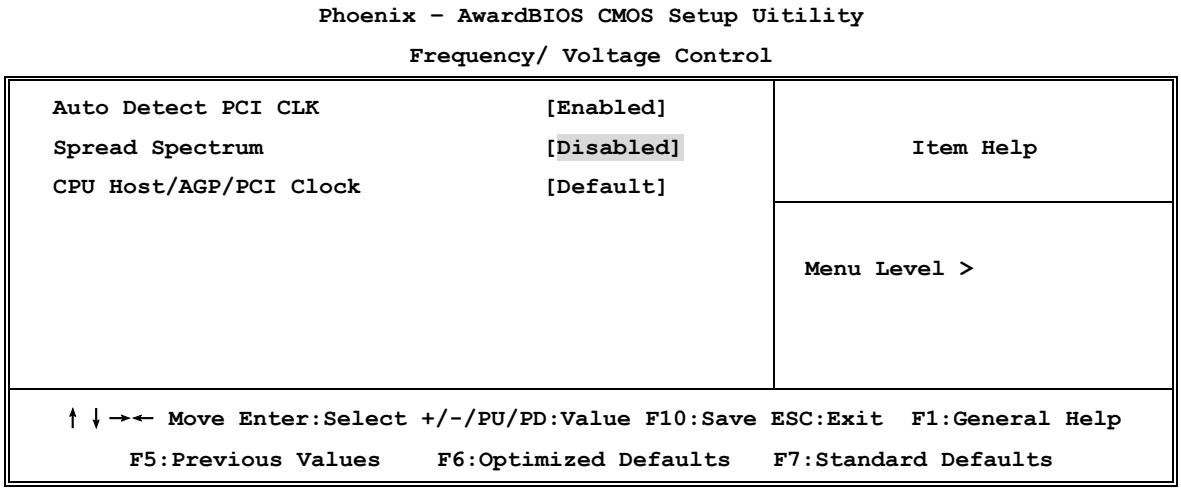
During Enabled, it displays information list below. The choice is either Enabled or Disabled.

Current CPU Temperature/Current System Temp/Current FAN1, FAN2 Speed/Vcore/ Vdd/3.3V/+5V/+12V/-12V/VBAT(V)/5VSB(V)

This will show the CPU/FAN/System voltage chart and FAN Speed.

3-11 Frequency/Voltage Control

This section is for setting CPU Frequency/Voltage Control.


Phoenix – AwardBIOS CMOS Setup Uitility
Frequency/ Voltage Control
Auto Detect PCI CLK [Enabled]
Spread Spectrum [Disabled]
CPU Host/AGP/PCI Clock [Default]
Item Help
Menu Level >
↑ ↓ →← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Optimized Defaults F7:Standard Defaults

Auto Detect PCI Clk

This item allows you to enable/disable auto detect PCI Clock.

The settings are: Enabled, Disabled.

Spread Spectrum

This item allows you to set the CPU Host/PCI clock and Spread Spectrum.

The settings are: Enabled, Disabled.

3-12 Load Standard/Optimized Defaults

Load Standard Defaults

When you press <Enter> on this item, you get confirmation dialog box with a message similar to:

Load Standard Defaults (Y/N)? N

Pressing <Y> loads the BIOS default values for the most stable, minimal-performance system operations.

Load Optimized Defaults

When you press <Enter> on this item, you get a confirmation dialog box with a message similar to:

Load Optimized Defaults (Y/N)? N

Pressing <Y> loads the default values that are factory settings for optimal performance system operations.

3-13 Set User Password

You can set either supervisor or user password, or both of them. The differences are:

User password: Can only enter but do not have the right to change the options of the setup menus. When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

ENTER PASSWORD:

Type the password, up to eight characters in length, and press <Enter>. The password typed now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection and not enter a password.

To disable a password, just press <Enter> when you are prompted to enter the password. A message will confirm that the password will be disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

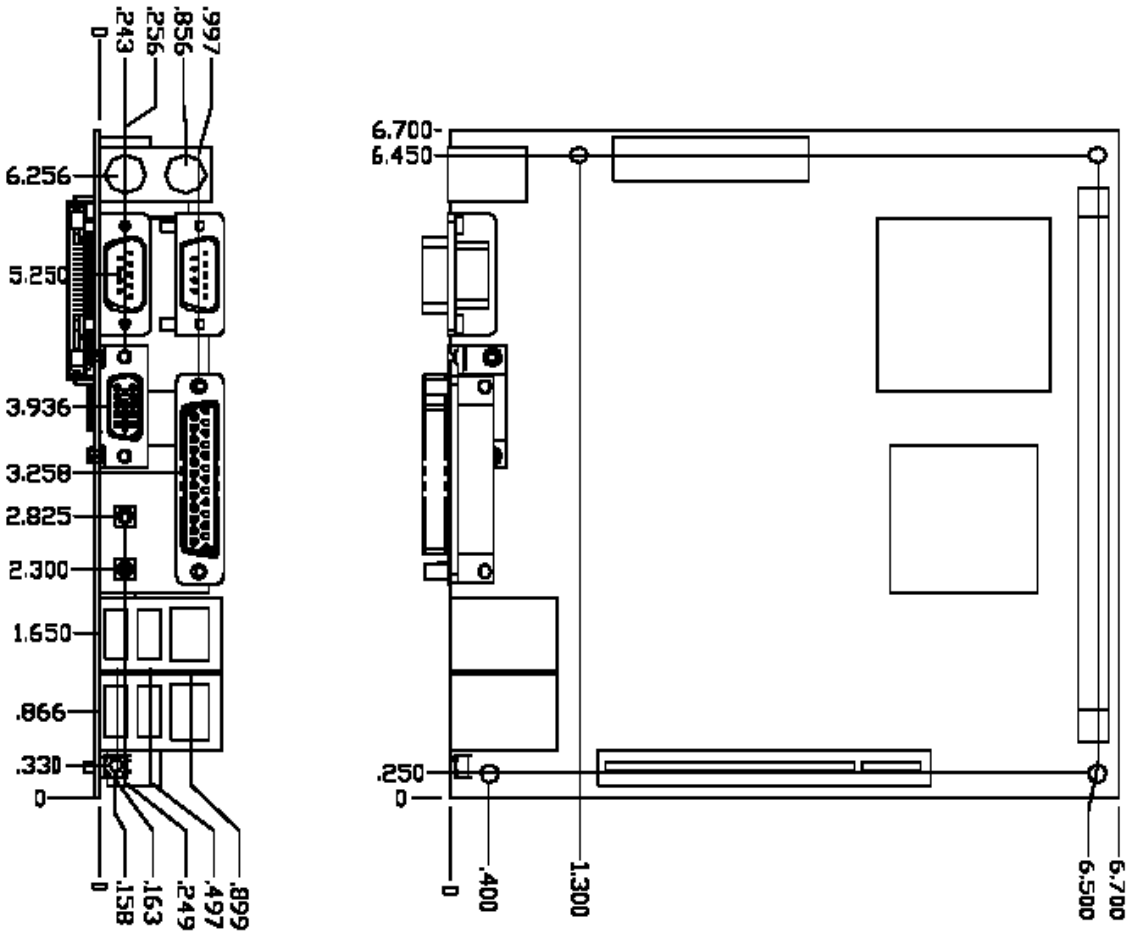
PASSWORD DISABLED.

When a password has been enabled, you will be prompted to enter it every time you try to enter Setup. This prevents an unauthorized person from changing any part of your system configuration.

Additionally, when a password is enabled, you can also require the BIOS to request a password every time your system is rebooted. This would prevent unauthorized use of your computer.

You determine when the password is required within the BIOS Features Setup Menu and its Security option. If the Security option is set to “System”, the password will be required both at boot and at entry to Setup. If set to “Setup”, prompting only occurs when trying to enter Setup.

MX266 Motherboard I/O Mechanical Draw


0
.243
.256
.856
.997
6.256
5.250
3.936
3.258
2.825
2.300
1.650
.866
.330
0
0
.158
.163
.249
.497
.899
6.700
6.450
.250
0
0
.400
1.300
6.500
6.700